Cal/Ecotox
Toxicity Data for Mallard Duck (Anas platyrhynchos)*

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
	see citation for doses of 42 compounds	TOX-MORT - toxicity benchmarks	LD50s for 42 compounds in aqueous and oil vehicles	see citation tables	a	1
	see citation for doses of 42 compounds	TOX-REPRO - development	incidence of reduced growth and abnormal survivors for 42 compounds	see citation tables	b	1
ACEPHATE	0, 350 mg/kg bw	TOX-MORT - dose-response data	mortality incidence by 20 hrs post-dose	11/36	c	2
ACEPHATE	0, 5 mg/L in water of dietary tadpoles (96 hours)	TOX-MORT - dose-response data	percent mortality	0% @ 5 mg/L	d	3
ACEPHATE	0, 5 mg/L in water of dietary tadpoles (96 hours)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain acetylcholinesterase activity compared with controls	109.7% @ 5mg/L	e	3
ACEPHATE	0, 350 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain cholinesterase inhibition compared with controls	51.7% (4.82 SE)	f	2
ACETONE	0, 10%, 100% solution	TOX-REPRO - development	embryo survival through incubation day 18 versus controls	decreased @ 100% solution, incubation days 3 or 8 exposure	g	4
ACETONE	0, 10%, 100% solution	TOX-REPRO - development	embryo weight and length by incubation day 18 versus controls	decreased @ 100% solution, incubation days 3 or 8 exposure	h	4
ALDICARB	NR	TOX-MORT - toxicity benchmarks	LD50	1.92 mg/kg	i	5
ALDICARB	NR	TOX-MORT - toxicity benchmarks	LD50	3.60 mg/kg	j	5
ALDICARB	NR	TOX-MORT - toxicity benchmarks	LD50	6.73 mg/kg	k	5
ALDICARB	NR	TOX-MORT - toxicity benchmarks	LD50	4.44 mg/kg	l	5
ALUMINUM SULFATE	0, 200, 1000, 5000 mg Al/kg diet, combined with low Ca:low P (LL), normal Ca:normal P (NN), or low Ca:high P (LH)	TOX-EXP IND - accumulation	Ca, Al, P concentrations in femur for different treatments after 2 and 10 wks of treatment	see table	m	6
ALUMINUM SULFATE	control, 0.1, 0.5% aluminum as Al2(SO4)3	TOX-EXP IND - accumulation	liver aluminum concentrations (ppm, dry wt) in ducklings	3.59 ppm dry wt @ control, 5.16 ppm @ 0.1%, 15.52 ppm @ 0.05%	n	7
ALUMINUM SULFATE	0, 200, 1000, 5000 mg Al/kg diet, combined with low Ca:low P (LL), normal Ca:normal P (NN), or low Ca:high P (LH)	TOX-Non-Repro-Sublethal - behavioral effects	food consumption versus controls	decreased @ 1000 (LL)	o	8
ALUMINUM SULFATE	control, 0.1, 0.5% aluminum as Al2(SO4)3	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma growth hormone and insulin-like growth factor-I concentrations	no effect	p	7
ALUMINUM SULFATE	0, 200, 1000, 5000 mg Al/kg diet, combined with low Ca:low P (LL), normal Ca:normal P (NN), or low Ca:high P (LH)	TOX-Non-Repro-Sublethal - whole animal	body weight growth versus controls	decreased @ 1000 ppm Al (LH, LL), 5000 ppm Al (NN)	q	8
ALUMINUM SULFATE	control, 0.1, 0.5% aluminum as Al2(SO4)3	TOX-Non-Repro-Sublethal - whole animal	body weight, average daily weight gain and tibiotarsus length, compared to controls	decrease @ 0.5%	r	7
ALUMINUM SULFATE	0, 200, 1000, 5000 mg Al/kg diet, combined with low Ca:low P (LL), normal Ca:normal P (NN), or low Ca:high P (LH)	TOX-Non-Repro-Sublethal - whole animal	femur breaking strength (LL,LH vs. NN diets) after 10 wks of treatment	decreased with LL and LH diets	s	6

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
ALUMINUM SULFATE	0, 200, 1000, 5000 mg Al/kg diet, combined with low Ca:low P (LL), normal Ca:normal P (NN), or low Ca:high P (LH)	TOX-Non-Repro-Sublethal - whole animal	femur mass and mean breaking force (LL, LH vs. NN diets) after 2 wks of treatment	decreased on LL and LH diets	t	6
ALUMINUM SULFATE	0, 200, 1000, 5000 mg Al/kg diet, combined with low Ca:low P (LL), normal Ca:normal P (NN), or low Ca:high P (LH)	TOX-Non-Repro-Sublethal - whole animal	growth of body components (tarsus, culmen) versus controls	decreased @ 1000 (LL), 1000 (LH), 5000 ppm (LH)	u	8
ALUMINUM SULFATE	0, 200, 1000, 5000 mg Al/kg diet, combined with low Ca:low P (LL), normal Ca:normal P (NN), or low Ca:high P (LH)	TOX-Non-Repro-Sublethal - whole animal	incidence of clinical signs (LL vs. LH vs. NN diets)	increased in LL diets	v	6
ALUMINUM SULFATE	0, 200, 1000, 5000 mg Al/kg diet, combined with low Ca:low P (LL), normal Ca:normal P (NN), or low Ca:high P (LH)	TOX-Non-Repro-Sublethal - whole animal	mortality versus controls	increased to 61% @ 1000 (LL), 100% @ 5000 (LL)	w	8
ALUMINUM SULFATE; SULFURIC ACID	0, 0.1% Al (low Al), 0.5% Al (high Al), 0.056 mol sulfate/kg (low acid), 0.277 mol sulfate/kg (high acid) in diet	TOX-Non-Repro-Sublethal - whole animal	growth of tibia versus ad libidum controls	reduced @ 0.5% Al or 0.277 mol sulfate/kg	x	9
ALUMINUM SULFATE; SULFURIC ACID	0, 0.1% Al (low Al), 0.5% Al (high Al), 0.056 mol sulfate/kg (low acid), 0.277 mol sulfate/kg (high acid) in diet	TOX-Non-Repro-Sublethal - whole animal	tibial dry weight, and ash and calcium content versus ad libidum controls	reduced @ 0.5% Al	y	9
AROCLOR 1242	0, 150 mg/kg diet	TOX-EXP IND - accumulation	PCB concentration in eggs (PCB resembled Aroclor 1260 profile most closely)	105.0 (7.7 SE) mg Aroclor 1260/kg egg @ 150 ppm	z	10
AROCLOR 1242	0, 150 mg/kg diet	TOX-MORT - dose-response data	mortality during experiment	no effect @ 150 ppm	aa	10
AROCLOR 1242	0, 150 mg/kg diet	TOX-Non-Repro-Sublethal - whole animal	body weight at 6, 8 and 12 wks of treatment	decrease @ 150 ppm	ab	10
AROCLOR 1242	0, 150 mg/kg diet	TOX-REPRO - development	weight and survival of offspring (exposed in ovo) fed control diet after hatching for 3 wks	no effect @ 150 ppm	ac	10
AROCLOR 1242	0, 150 mg/kg diet	TOX-REPRO - physiology	eggshell thickness, compared to control	8.9% decrease @ 150 ppm	ad	10
AROCLOR 1242	0, 150 mg/kg diet	TOX-REPRO - reproductive success	embryo mortality, # infertile eggs/clutch or # eggs hatched/clutch	no effect @ 150 ppm	ae	10
AROCLOR 1254	mean(SE) of 4 samples: 26.3(0.2) ppm, wet wt, in diet	TOX-EXP IND - accumulation	mean(SE) wet wt concentrations of Aroclor 1254 in carcasses of 3 week old ducklings	29.5(1.4) ppm	af	11
AROCLOR 1254	mean(SE) of 4 samples: 26.3(0.2) ppm, wet wt, in diet	TOX-EXP IND - accumulation	mean(SE) wet wt concentrations of Aroclor 1254 in eggs	23.3(1.0) ppm	ag	11
AROCLOR 1254	mean(SE) of 4 samples: 26.3(0.2) ppm, wet wt, in diet	TOX-EXP IND - accumulation	range of wet wt concentrations of Aroclor 1254 in adult carcasses	55-65 ppm	ah	11
AROCLOR 1254	0,4,20,100,250,500 mg/kg bw	TOX-EXP IND - biomarkers	hepatic microsomal EROD and PROD activities versus controls	increased @ 20,100, 250, 500 mg/kg bw	ai	12
AROCLOR 1254	0, 40 ppm	TOX-Non-Repro-Sublethal - behavioral effects	food consumption rate (184 g/d) compared to control (173 g/d)	no effect	aj	13
AROCLOR 1254	mean(SE) of 4 samples: 26.3(0.2) ppm, wet wt, in diet	TOX-Non-Repro-Sublethal - organ/system effects	body and liver weights of parents and offspring versus controls	no effect	ak	11
AROCLOR 1254	0,4,20,100,250,500 mg/kg bw	TOX-Non-Repro-Sublethal - organ/system effects	leukocyte counts, plasma biochemistry, corticosterone concentration versus controls	no effect	al	12
AROCLOR 1254	0,4,20,100,250,500 mg/kg bw	TOX-Non-Repro-Sublethal - organ/system effects	lymphocyte proliferation to PHA versus controls	increased @ 250, 500 mg/kg bw	am	12

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
AROCLOR 1254	0,4,20,100,250,500 mg/kg bw	TOX-Non-Repro-Sublethal - organ/system effects	plasma triiodothyronine concentrations versus controls	decreased @ 20, 100, 250, 500 mg/kg bw	an	12
AROCLOR 1254	0,4,20,100,250,500 mg/kg bw	TOX-Non-Repro-Sublethal - organ/system effects	thyroid wt/body wt and liver wt/body wt ratios versus controls	increased @ 100, 250, 500 mg/kg bw	ao	12
AROCLOR 1254	0, 0.5, 5.0, 50 mg/kg diet	TOX-Non-Repro-Sublethal - whole animal	PCB treatment altered the shape of the body weight growth curve but not the asymptotic weight	significant effect	ap	14
AROCLOR 1254	0, 40 ppm	TOX-REPRO - physiology	eggshell thickness	no effect	aq	13
AROCLOR 1254	0, 1000 mg/kg bw	TOX-REPRO - physiology	post-dose eggshell thickness versus pre-dose thickness	decreased @ 1000 mg/kg bw	ar	15
AROCLOR 1254	mean(SE) of 4 samples: 26.3(0.2) ppm, wet wt, in diet	TOX-REPRO - reproductive success	reproductive success or nest attentiveness versus controls	no effect	as	11
AROCLOR 1254; DDE (4,4'-)	0, 40 ppm DDE + 40 ppm PCB	TOX-EXP IND - accumulation	mean DDE and PCB residue levels in eggs	344 (95% CL; 156-686) ppm DDE lipid basis and 346 (95%CL; 133-686) ppm PCB lipid basis @ 40 ppm DDE + 40 ppm PCB diet	at	13
AROCLOR 1254; DDE (4,4'-)	0, 40 ppm DDE + 40 ppm PCB	TOX-Non-Repro-Sublethal - behavioral effects	food consumption rate (181 g/d) compared to control (173 g/d)	no effect	au	13
AROCLOR 1254; DDE (4,4'-)	0, 40 ppm DDE + 40 ppm PCB	TOX-REPRO - physiology	eggshell thickness, compared to control	19% decrease	av	13
AROCLOR 1254; DDE (4,4'-)	0, 40 ppm DDE, 40 ppm Aroclor, 40 ppm DDE + 40 ppm Aroclor	TOX-REPRO - physiology	numbers of mammillary cores and basal caps on eggshell membranes versus controls	decreased with all treatments	aw	16
AROCLOR 1254; DDE (4,4'-)	0, 40 ppm DDE + 40 ppm PCB	TOX-REPRO - reproductive success	figure of # eggs/female/wk over time	see citation	ax	13
ARSENATE, SODIUM	0, 30, 100, 300 ppm	TOX-EXP IND - accumulation	accumulation of arsenic in brain tissue (geometric means in parentheses)	increased @ 100 ppm (0.4 ppm, dry wt), 300 ppm (0.8 ppm, dry wt)	ay	17
ARSENATE, SODIUM	0, 30, 100, 300 ppm	TOX-EXP IND - accumulation	arsenic concentrations in liver (geometric means in parentheses)	increased @ 100 ppm (0.3 ppm, dry wt), 300 ppm (1.3 ppm, dry wt)	az	17
ARSENATE, SODIUM	0, 30, 100, 300 ppm	TOX-MORT - dose-response data	survival rate versus controls	no effect	ba	17
ARSENATE, SODIUM	0, 30, 100, 300 ppm	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hematocrit and hemoglobin	no effect	bb	17
ARSENATE, SODIUM	0, 30, 100, 300 ppm	TOX-Non-Repro-Sublethal - cellular/biochemical effects	incidence of altered brain and liver biochemistry	increased @ 10, 100, 300 ppm	bc	17
ARSENATE, SODIUM	0, 30, 100, 300 ppm	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma biochemistry changes versus controls	increased @ 300 ppm	bd	17
ARSENATE, SODIUM	0, 30, 100, 300 ppm	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma concentration of triglycerides	increased @ 10, 100, 300 ppm	be	17
ARSENATE, SODIUM	0, 30, 100, 300 ppm	TOX-Non-Repro-Sublethal - organ/system effects	incidence of histopathological lesions, and liver, brain, and spleen weights	no effect	bf	17
ARSENATE, SODIUM	0, 30, 100, 300 ppm	TOX-Non-Repro-Sublethal - whole animal	growth rate versus controls	decreased @ 30, 100, 300 ppm	bg	17
ARSENATE, SODIUM	0, 30, 100, 300 ppm	TOX-Non-Repro-Sublethal - whole animal	growth rate versus controls	decreased @ 300 ppm	bh	17

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
ARSENATE, SODIUM; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 200 ppm As, 15 ppm Se + 200 ppm As, 50 ppm Se + 200 ppm As (each dose combined with 22% protein in diet)	TOX-MORT - dose-response data	incidence of mortality versus controls	increased (40%) @ 60 ppm Se	bi	18
ARSENATE, SODIUM; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 200 ppm As, 15 ppm Se + 200 ppm As, 50 ppm Se + 200 ppm As (each dose combined with 7% protein in diet)	TOX-MORT - dose-response data	incidence of mortality versus controls	increased (100%) @ 60 ppm Se and (53%) @ 200 ppm As	bj	18
ARSENATE, SODIUM; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 200 ppm As, 15 ppm Se + 200 ppm As, 50 ppm Se + 200 ppm As (each dose combined with 22% protein in diet)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	glutathione peroxidase activity versus controls	increased @ 60 ppm Se	bk	18
ARSENATE, SODIUM; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 200 ppm As, 15 ppm Se + 200 ppm As, 50 ppm Se + 200 ppm As (each dose combined with 22% protein in diet)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	incidence of ducklings with histopathological lesions versus controls	increased @ 60 ppm Se	bl	18
ARSENATE, SODIUM; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 200 ppm As, 15 ppm Se + 200 ppm As, 50 ppm Se + 200 ppm As (each dose combined with or 22% protein in diet)	TOX-Non-Repro-Sublethal - whole animal	growth rate of body weight versus controls	decreased @ 60 ppm Se, 200 ppm As	bm	18
ARSENITE, SODIUM	0, 100 mg/kg bw	TOX-REPRO - physiology	post-dose eggshell thickness versus pre-dose thickness	decreased @ 100 mg/kg bw	bn	15
ASULAM	0, 1600, 2600, 4000 mg/kg bw	TOX-MORT - dose-response data	percent mortality after 21 days	10% @ 4000 mg/kg	bo	19
ASULAM	0, 33,750, 55,000, 75,000, 100,000 mg/kg diet	TOX-Non-Repro-Sublethal - behavioral effects	food consumption compared with controls	decreased @ all doses	bp	19
ASULAM	0, 33,750, 55,000, 75,000, 100,000 mg/kg diet	TOX-Non-Repro-Sublethal - whole animal	body weight gain by day 8 compared with controls	decreased @ all doses	bq	19
BENDIOCARB	1.17 ug/g ingesta	TOX-EXP IND - biomarkers	percent inhibition of post-mortem brain cholinesterase activity compared to control	decreased (73%)	br	20
BENZO[k]FLUORANTHENE	control, 0.2, 2.0 mg benzo[k]fluoranthene/kg egg; injected into egg yolks	TOX-REPRO - development	embryo mortality, compared to controls	increase @ 0.2, 2.0 mg/kg egg	bs	21
BISMUTH COMPOUNDS; IRON COMPOUNDS	0, six #4 iron or bismuth shot; see paper for retention and dissolution of shot in gizzards of treated birds	TOX-EXP IND - accumulation	mean(SE) wet wt Bi concentration in organs of Bi-treated birds	6.86(0.99) ppm, kidneys; 2.23(0.492) ppm, liver; 0.468(0.277) ppm, gonads	bt	22
BISMUTH COMPOUNDS; IRON COMPOUNDS	0, six #4 iron or bismuth shot; see paper for retention and dissolution of shot in gizzards of treated birds	TOX-EXP IND - accumulation	mean(SE) wet wt Fe concentration in organs of Fe-treated birds	145(6.0) ppm, kidneys; 1086(72) ppm, liver; 32.1(6.3) ppm, gonads	bu	22
BISMUTH COMPOUNDS; IRON COMPOUNDS	0, six #4 iron or bismuth shot; see paper for retention and dissolution of shot in gizzards of treated birds	TOX-MORT - dose-response data	mortality versus controls	no effect	bv	22
BISMUTH COMPOUNDS; IRON COMPOUNDS	0, six #4 iron or bismuth shot; see paper for retention and dissolution of shot in gizzards of treated birds	TOX-Non-Repro-Sublethal - cellular/biochemical effects	histopathological lesions in gonads, liver, kidneys versus controls	no effect	bw	22
BISMUTH COMPOUNDS; IRON COMPOUNDS	0, six #4 iron or bismuth shot; see paper for retention and dissolution of shot in gizzards of treated birds	TOX-Non-Repro-Sublethal - whole animal	body weight, organ weights (liver, kidney, gonads, gizzard) or hematocrit versus controls	no effect	bx	22
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	five #4 pellets of lead, iron, or bismuth/tin embedded in breast muscle	TOX-EXP IND - accumulation	mean(SE) wet wt concentration of bismuth in organs	130(10.1) ppm in kidneys, 0.19(0.06) ppm in liver	by	23
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-EXP IND - accumulation	mean(SE) wet wt concentrations of Pb in Pb-dosed birds	213(27.1) ppm, kidney; 91(4.55) ppm, liver; 9.8(3.22) ppm, ovary; 3.49(0.61) ppm, testis	bz	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-EXP IND - accumulation	mean(SE) wet wt concentrations of Fe in Fe-dosed birds	237(17.2) ppm, kidney; 1936(233) ppm, liver; 90.6(6.85) ppm, ovary; 13.1(1.29) ppm, testis	ca	24

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BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-EXP IND - accumulation	mean(SE) wet wt concentrations of Bi in Bi-dosed birds	1.54(0.280) ppm, kidney; 0.637(0.134) ppm, liver; 0.042(0.007) ppm, ovary; 0.098(0.042) ppm, testis	cb	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	five #4 pellets of lead, iron, or bismuth/tin embedded in breast muscle	TOX-MORT - dose-response data	mean survival times compared among lead, iron and bismuth dosed birds	no differences	cc	23
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-MORT - dose-response data	mortality versus controls	increased with Pb, no effect with Fe or Bi	cd	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-Non-Repro-Sublethal - cellular/biochemical effects	histopathology of kidney, liver, testis, heart, lung versus controls	no effect with Fe or Bi	ce	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	five #4 pellets of lead, iron, or bismuth/tin embedded in breast muscle	TOX-Non-Repro-Sublethal - cellular/biochemical effects	mean hematocrit values compared among lead, iron and bismuth dosed birds	no differences	cf	23
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-Non-Repro-Sublethal - organ/system effects	gizzard and kidney weight versus controls	increased with Pb; no effect with Fe or Bi	cg	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-Non-Repro-Sublethal - organ/system effects	liver weight versus controls (females only)	decreased with Pb	ch	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-Non-Repro-Sublethal - whole animal	body weight, gonad weight, hematocrit versus controls	decreased with Pb; no effect with Fe or Bi	ci	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	five #4 pellets of lead, iron, or bismuth/tin embedded in breast muscle	TOX-Non-Repro-Sublethal - whole animal	mean body weight and organ weights compared among lead, iron and bismuth dosed birds	no differences	cj	23
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-REPRO - physiology	onset of lay and time to lay 21 eggs versus controls	no effect with Fe or Bi	ck	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-REPRO - physiology	weight of eggs that hatched versus controls	increased with Fe	cl	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-REPRO - physiology	weight of eggs that did not hatch versus controls	increased with Bi	cm	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-REPRO - reproductive success	egg weight, eggshell thickness, fertility, hatchability versus controls	no effect with Fe or Bi	cn	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-REPRO - reproductive success	survival to 7 d, organ histopathology, hematocrit, sex ratios, kidney or liver weights of ducklings versus controls	no effect with Fe or Bi	co	24
BISMUTH COMPOUNDS; IRON COMPOUNDS; LEAD (elemental)	0, eight #4 iron, bismuth, or lead shot, administered on Days 1, 30, 60, 90; see paper for dissolution and retention of shot in gizzards of treated birds	TOX-REPRO - reproductive success	weight of hatchlings versus controls	decreased with Bi	cp	24
BORIC ACID	control, 100, 400, 1600 ppm B as boric acid	TOX-EXP IND - accumulation	boron accumulation in brain (geometric mean; ug/g dry weight)	2 ug/g @ control; 4 ug/g @ 100 ppm; 5 ug/g @ 400 ppm; 51 ug/g @ 1600 ppm	cq	25

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BORIC ACID	control, 30, 300, 1000 ppm B as boric acid (dry wt basis)	TOX-EXP IND - accumulation	boron concentrations in adult tissues (geometric mean; ug/g dry weight).	Egg; 3 ug/g @ 30 ppm, 13 ug/g @ 300 ppm, 49 ug/g @ 1000 ppm: Liver; 15 ug/g @ 300 ppm, 33 ug/g @ 1000 ppm: Brain; 14 ug/g @ 300 ppm, 41 ug/g @ 1000 ppm	cr	26
BORIC ACID	control, 30, 300, 1000 ppm B as boric acid (dry wt basis)	TOX-EXP IND - accumulation	boron concentrations in ducklings 21 d of age (geometric mean; ug/g dry weight). Concentrations at other doses were not detected.	Liver; 3 ug/g @ 30 ppm, 17 ug/g @ 300 ppm, 51 ug/g @ 1000 ppm: Brain; 4 ug/g @ 30 ppm, 19 ug/g @ 300 ppm, 66 ug/g @ 1000 ppm	cs	26
BORIC ACID	control, 100, 400, 1600 ppm B as boric acid	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain ATP (nmol/g) and protein (mg/g) concentrations	decrease @ 400 and 1600 ppm	ct	25
BORIC ACID	control, 100, 400, 1600 ppm B as boric acid	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hematocrit and hemoglobin concentration, compared to controls	decrease @ 1600 ppm	cu	25
BORIC ACID	control, 100, 400, 1600 ppm B as boric acid	TOX-Non-Repro-Sublethal - cellular/biochemical effects	liver boron concentration (geometric mean; ug/g dry weight)	1 ug/g @ controls; 3 ug/g @ 100 ppm; 3 ug/g @ 400 ppm; 29 ug/g @ 1600 ppm	cv	25
BORIC ACID	control, 100, 400, 1600 ppm B as boric acid	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma calcium concentration (6-10% greater than controls) and brain acetylcholinestrase activity (umol/min/g)	increase @ 1600 ppm	cw	25
BORIC ACID	control, 100, 400, 1600 ppm B as boric acid	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma triglyceride concentration (21-42% increase, compared to controls)	increase @ 100, 400, 1600 ppm	cx	25
BORIC ACID	control, 100, 400, 1600 ppm B as boric acid	TOX-Non-Repro-Sublethal - whole animal	growth rate measured as changes in body weight, compared to control	decrease @ 1600 ppm	cy	25
BORIC ACID	control, 30, 300, 1000 ppm B as boric acid (dry wt basis)	TOX-Non-Repro-Sublethal - whole animal	hatchling weight gain over 21 d, compared to controls	decrease @ 30, 300, 1000 ppm	cz	26
BORIC ACID	control, 30, 300, 1000 ppm B as boric acid (dry wt basis)	TOX-REPRO - development	% embryo mortality (day 15 to hatch) and duckling mortality (hatch to day 7)	increase @ 1000 ppm	da	26
BORIC ACID	control, 30, 300, 1000 ppm B as boric acid (dry wt basis)	TOX-REPRO - development	body weight of hatchlings, compared to controls	decrease @ 300, 1000 ppm	db	26
BORIC ACID	control, 30, 300, 1000 ppm B as boric acid (dry wt basis)	TOX-REPRO - physiology	eggshell thickness and Ratcliffe index of eggshell quality	no effect	dc	26
BORIC ACID	control, 30, 300, 1000 ppm B as boric acid (dry wt basis)	TOX-REPRO - reproductive success	% hatching success in fertile eggs and productivity per female (mean # of 21 d old ducklings)	decrease @ 1000 ppm	dd	26
BORIC ACID; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 1000 ppm B, 15 ppm Se + 1000 ppm B, 60 ppm Se + 1000 ppm B (all treatments were conducted with 22% protein in the diet)	TOX-EXP IND - accumulation	geometric mean Se and B concentrations in liver	10.8 (@ 15 ppm Se), 56.0 (@ 60 ppm) ppm Se, wet wt 11.0 (@ 1000 ppm B) ppm B, wet wt	de	27
BORIC ACID; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 1000 ppm B, 15 ppm Se + 1000 ppm B, 60 ppm Se + 1000 ppm B (all treatments were conducted with 7% protein in the diet)	TOX-EXP IND - accumulation	geometric mean Se and B concentrations in liver	22.5 (@ 15 ppm Se w/out B), 41.9 (@ 15 ppm Se w/B) ppm Se, wet wt 13.0 (@ 1000 ppm B) ppm B, wet wt	df	27
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-EXP IND - accumulation	mean (SE) wet wt concentrations of B and Se in liver	4.6 (0.18) ppm B @ 450 ppm B; 8.5 (0.34) ppm B @ 900 ppm B; 3.7 (0.16) ppm Se @ 3.5 ppm Se; 6.2 (0.27) ppm Se @ 7 ppm	dg	28
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-EXP IND - accumulation	mean (SE) wet wt concentrations of B and Se in egg	6.5 (0.25) ppm B @ 450 ppm B; 11 (0.4) ppm B @ 900 ppm B; 3.5 (0.10) ppm Se @ 3.5 ppm Se; 7.1 (0.28) ppm Se @ 7 ppm	dh	28

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
BORIC ACID; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 1000 ppm B, 15 ppm Se + 1000 ppm B, 60 ppm Se + 1000 ppm B (all treatments were conducted with 22% protein in the diet)	TOX-MORT - dose-response data	survival versus controls	decreased @ 60 ppm Se (47% mort.)	di	27
BORIC ACID; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 1000 ppm B, 15 ppm Se + 1000 ppm B, 60 ppm Se + 1000 ppm B (all treatments were conducted with 7% protein in the diet)	TOX-MORT - dose-response data	survival versus controls	decreased @ 60 ppm Se (100% mort.)	dj	27
BORIC ACID; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 1000 ppm Bo, 15 ppm Se + 1000 ppm Bo, 60 ppm Se + 1000 ppm Bo (all treatments were conducted with 22% protein in the diet)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hematocrits and hemoglobin concentrations versus controls	decreased @ 1000 ppm B	dk	27
BORIC ACID; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 1000 ppm B, 15 ppm Se + 1000 ppm B, 60 ppm Se + 1000 ppm B (all treatments were conducted with 7% protein in the diet)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hematocrits and hemoglobin concentrations versus controls	decreased @ 15 ppm Se (with or w/out B), and 1000 ppm B	dl	27
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hemoglobin concentrations versus controls	reduced @ 900 ppm B	dm	28
BORIC ACID; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 1000 ppm B, 15 ppm Se + 1000 ppm B, 60 ppm Se + 1000 ppm B (all treatments were conducted with 22% protein in the diet)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	incidence of plasma chemistry changes versus controls	increased @ 15, 60 ppm Se (with and w/out B), 1000 ppm B	dn	27
BORIC ACID; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 1000 ppm B, 15 ppm Se + 1000 ppm B, 60 ppm Se + 1000 ppm B (all treatments were conducted with 7% protein in the diet)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	incidence of plasma chemistry changes versus controls	increased @ 15 ppm Se (with and w/out B), 1000 ppm B	do	27
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-Non-Repro-Sublethal - organ/system effects	liver weight versus 450 ppm B group	decreased @ 900 ppm B	dp	28
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-Non-Repro-Sublethal - whole animal	body weight versus controls	reduced @ 900 ppm B	dq	28
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-Non-Repro-Sublethal - whole animal	body weight versus controls	reduced @ 7 ppm Se	dr	28
BORIC ACID; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 1000 ppm B, 15 ppm Se + 1000 ppm B, 60 ppm Se + 1000 ppm B (all treatments were conducted with 22% protein in the diet)	TOX-Non-Repro-Sublethal - whole animal	body, liver, and spleen weight; tarsus length versus controls	decreased @ 60 ppm Se	ds	27
BORIC ACID; SELENOMETHIONINE	0, 15 ppm Se, 60 ppm Se, 1000 ppm B, 15 ppm Se + 1000 ppm B, 60 ppm Se + 1000 ppm B (all treatments were conducted with 7% protein in the diet)	TOX-Non-Repro-Sublethal - whole animal	body, liver, and spleen weight; tarsus length versus controls	decreased @ 15 ppm Se	dt	27
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-REPRO - development	body weight and growth at 0, 7,and 14 days post-hatch versus controls	reduced @ 900 ppm B	du	28
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-REPRO - development	body weight and weight gain at 7 and 14 days post-hatch versus 3.5 ppm Se group	reduced @ 7 ppm Se	dv	28
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-REPRO - development	total SH, liver protein, sorbitol dehyrogenase versus controls	decreased @ 900 ppm B	dw	28
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-REPRO - reproductive success	duckling production versus 3.5 ppm Se group	reduced @ 7 ppm	dx	28
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-REPRO - reproductive success	egg weight, hatching success, egg fertility versus controls	reduced @ 900 ppm B	dy	28
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-REPRO - reproductive success	hatching success versus controls	reduced @ 7 ppm Se	dz	28

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-REPRO - reproductive success	liver weight, hemoglobin concentrations, hematocrit versus controls	no effect due to added Se	ea	28
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-REPRO - reproductive success	onset of egg laying, eggshell thickness, frequency of embryo deformities versus controls	no effect	eb	28
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-REPRO - reproductive success	onset of egg laying, eggshell thickness, egg weight, egg fertility, embryo deformities versus controls	no effect due to added Se	ec	28
BORIC ACID; SELENOMETHIONINE	0, 450 ppm B, 900 ppm B, with 0, 3.5, or 7 ppm Se	TOX-REPRO - reproductive success	survival between 7 and 14 days post-hatch versus controls	increased @ 3.5 ppm Se	ed	28
CADMIUM CHLORIDE	0,20,200 ppm	TOX-EXP IND - accumulation	Cd concentrations in eggs versus controls	increased to 0.010 (@ 20 ppm), 0.040 (@ 200 ppm) ppm, wet wt	ee	29
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-EXP IND - accumulation	kidney Cd concentration versus controls	increased @ 10, 50 ug/g diet	ef	30
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-EXP IND - accumulation	kidney Cu concentration versus controls	increased @ 10, 50 ug/g diet	eg	30
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-EXP IND - accumulation	kidney Zn concentration versus controls	increased @ 10, 50 ug/g diet	eh	30
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-EXP IND - accumulation	liver cadmium concentration versus controls	increased @ 10, 50 ug/g diet	ei	30
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-EXP IND - accumulation	liver Cu concentration versus controls	no effect	ej	30
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-EXP IND - accumulation	liver Zn concentration versus controls	no effect	ek	30
CADMIUM CHLORIDE	0, 2, 20, 200 ppm	TOX-EXP IND - accumulation	mean Cd concentrations in kidneys (ppm, wet wt) by 90 days	0.46 (@ 0 ppm), 4.63 (@ 2 ppm), 54.33 (@ 20 ppm), 77.22 (@ 200 ppm) ppm, wet wt	el	31
CADMIUM CHLORIDE	0, 2, 20, 200 ppm	TOX-EXP IND - accumulation	mean Cd concentrations in testes (ppm, wet wt) by 90 days	0.03 (@ 0 ppm), 0.02 (@ 2 ppm), 0.72 (@ 20 ppm) 8.47 (@ 200 ppm) ppm, wet wt	em	31
CADMIUM CHLORIDE	0,20,200 ppm diet	TOX-EXP IND - accumulation	mean Cd concentrations in liver after 90 d of treatment	2.116 (@ 2 ppm), 19.510 (@ 20 ppm), 96.600 9@ 200 ppm) ppm, wet wt	en	29
CADMIUM CHLORIDE	0,20,200 ppm	TOX-EXP IND - accumulation	mean Cd concentrations in kidneys after 90 d of treatment	4.627 (@ 2 ppm), 54.333 (@ 20 ppm), 77.222 (@ 200 ppm) ppm, wet wt	eo	29
CADMIUM CHLORIDE	0,5,10,20 ppm diet	TOX-EXP IND - accumulation	mean Cd concentrations in liver by 12 wks of treatment	0.10 (@ 0 ppm), 10.13 (@ 5 ppm), 16.25 (@ 10 ppm), 42.21 (@ 20 ppm) ppm, wet wt	ep	32
CADMIUM CHLORIDE	0,20,200 ppm	TOX-MORT - dose-response data	mortality versus controls	no effect	eq	29
CADMIUM CHLORIDE	0,50,150,450 ppm diet	TOX-Non-Repro-Sublethal - behavioral effects	food consumption compared to controls	no effect	er	33
CADMIUM CHLORIDE	0,50,150,450 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	liver aldolase activity, plasma triiodothyronine levels	decreased @ 450 ppm	es	33
CADMIUM CHLORIDE	0,5,10,20 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	packed cell volume and hemoglobin concentration by 8 wks of treatment compared to controls	decreased @ 20 ppm	et	32
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma glucose, NEFA, urea, or uric acid versus controls	no effect	eu	30

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
CADMIUM CHLORIDE	0,50,150,450 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma uric acid, adrenal corticosterone levels	increased @ 450 ppm	ev	33
CADMIUM CHLORIDE	0,5,10,20 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	serum glutamic pyruvic transaminase activity by 8 wks of treatment compared to controls	increased @ 20 ppm	ew	32
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-Non-Repro-Sublethal - cellular/biochemical effects	thyroid hormone concentrations versus controls	no effect	ex	30
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-Non-Repro-Sublethal - organ/system effects	% packed cell volume versus controls	no effect	ey	30
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-Non-Repro-Sublethal - organ/system effects	adrenal wt, corticosterone concentrations versus controls	no effect	ez	30
CADMIUM CHLORIDE	0, 2, 20, 200 ppm	TOX-Non-Repro-Sublethal - organ/system effects	incidence of kidney lesions versus controls	increased @ 200 ppm	fa	31
CADMIUM CHLORIDE	0,5,10,20 ppm diet	TOX-Non-Repro-Sublethal - organ/system effects	incidence of kidney lesions by 12 wks of treatment compared to controls	increased @ 20 ppm	fb	32
CADMIUM CHLORIDE	0, 2, 20, 200 ppm	TOX-Non-Repro-Sublethal - organ/system effects	incidence of testes alterations (atrophy, decreased spermatogenesis) versus controls	increased @ 200 ppm	fc	31
CADMIUM CHLORIDE	0,50,150,450 ppm diet	TOX-Non-Repro-Sublethal - organ/system effects	kidney and adrenal weights compared to controls	increased @ 150, 450 ppm	fd	33
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-Non-Repro-Sublethal - organ/system effects	liver glycogen concentration versus controls	no effect	fe	30
CADMIUM CHLORIDE	0,20,200 ppm	TOX-Non-Repro-Sublethal - organ/system effects	mean kidney weight versus controls	increased @ 200 ppm/60 or 90 d of treatment, 30 d post-treatment	ff	29
CADMIUM CHLORIDE	0,20,200 ppm	TOX-Non-Repro-Sublethal - organ/system effects	mean testis weight versus controls	decreased @ all doses/30 d post-treatment, and 200 ppm/90 d of treatment	fg	29
CADMIUM CHLORIDE	0, 2, 20, 200 ppm	TOX-Non-Repro-Sublethal - organ/system effects	weight of kidneys versus controls	increased @ 200 ppm	fh	31
CADMIUM CHLORIDE	0, 2, 20, 200 ppm	TOX-Non-Repro-Sublethal - organ/system effects	weight of testes versus controls	decreased @ 200 ppm	fi	31
CADMIUM CHLORIDE	0,50,150,450 ppm diet	TOX-Non-Repro-Sublethal - whole animal	body and liver weights compared to controls	decreased @ 450 ppm	fj	33
CADMIUM CHLORIDE	0,5,10,20 ppm diet	TOX-Non-Repro-Sublethal - whole animal	body weight, liver weight, and femur density compared to controls	no effect	fk	32
CADMIUM CHLORIDE	0,20,200 ppm	TOX-Non-Repro-Sublethal - whole animal	body wt, hematocrit, hemoglobin, food consumption versus controls	no effect	fl	29
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-Non-Repro-Sublethal - whole animal	brain, liver, kidney, testes weights versus controls	no effect	fm	30
CADMIUM CHLORIDE	0, 10, or 50 ug Cd/g	TOX-Non-Repro-Sublethal - whole animal	BW versus controls	no effect	fn	30
CADMIUM CHLORIDE; COPPER COMPOUNDS; LEAD CHLORIDE	0, 10 ppm Cd, 100 ppm Cd, 10 ppm Pb, 100 ppm Pb, 5 ppm Cd +5 ppm Pb, 50 ppm Cd + 50 ppm Pb	TOX-EXP IND - accumulation	mean (SE) Cu concentrations (ug/g, dry wt) in kidney	56.7(7.7) @ 100 ppm Cd; 37.7 (3.7) @ 50 ppm Cd + 50 ppm Pb (ug/g, dry wt)	fo	34
CADMIUM CHLORIDE; LEAD CHLORIDE	0, 10 ppm Cd, 100 ppm Cd, 10 ppm Pb, 100 ppm Pb, 5 ppm Cd +5 ppm Pb, 50 ppm Cd + 50 ppm Pb	TOX-EXP IND - accumulation	mean (SE) Cd concentrations in kidney	67.8 (12.4) @ 10 ppm Cd; 371.8 (22.3) @ 100 ppm Cd; 3.4 (0.6) @ 100 ppm Pb; 201.0 (26.9) @ 50 ppm Cd + 50 ppm Pb (ug/g, dry wt)	fp	34

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
CADMIUM CHLORIDE; LEAD CHLORIDE	0, 10 ppm Cd, 100 ppm Cd, 10 ppm Pb, 100 ppm Pb, 5 ppm Cd +5 ppm Pb, 50 ppm Cd + 50 ppm Pb	TOX-EXP IND - accumulation	mean (SE) concentrations in liver	7.2 (0.9) ug Pb/g @ 100 ppm Pb; 104.8 (19.1) ug Pb/g @ 100 ppm Cd; 54.2 (3.7) ug Cd/g @ 50 ppm Cd + 50 ppm Pb (dry wt)	fq	34
CADMIUM CHLORIDE; LEAD CHLORIDE	0, 10 ppm Cd, 100 ppm Cd, 10 ppm Pb, 100 ppm Pb, 5 ppm Cd +5 ppm Pb, 50 ppm Cd + 50 ppm Pb	TOX-EXP IND - accumulation	mean (SE) Pb concentrations in kidney	4.1 (0.5) @ 10 ppm Pb; 22.5 (1.5) @ 100 ppm Pb; 3.1 (0.3) @ 5 ppm Cd + 5 ppm Pb; 16.1 (1.4) @ 50 ppm Cd+ 50 ppm Pb (ug/g, dry wt)	fr	34
CADMIUM CHLORIDE; LEAD CHLORIDE; ZINC COMPOUNDS	0, 10 ppm Cd, 100 ppm Cd, 10 ppm Pb, 100 ppm Pb, 5 ppm Cd +5 ppm Pb, 50 ppm Cd + 50 ppm Pb	TOX-EXP IND - accumulation	mean (SE) Zn concentrations (ug/g, dry wt) in kidney	99 (6) @ 110 ppm Cd; 125 (7) @ 100 ppm Cd; 100 (5) @ 5 ppm Cd + 5 ppm Pb; 112 (2) @ 50 ppm Cd + 50 ppm Pb	fs	34
CARBOFURAN	NR	TOX-MORT - toxicity benchmarks	LD50's determined at ages 36 hr, 7 d, 30 d, and 6 mos, respectively (95% CI in parenth.)	0.370 (0.283-0.484), 0.628 (0.530-0.744), 0.510 (0.410-0.635), 0.415 (0.333-0.516)	ft	5
CARBOFURAN	0, 132, 264 g carbofuran/ha	TOX-Non-Repro-Sublethal - behavioral effects	latency of approach to stimulus compared with controls	increased @ 264 g/ha (150, 300 m exposure distance)	fu	35
CARBOFURAN	0, 132, 264 g carbofuran/ha	TOX-Non-Repro-Sublethal - behavioral effects	occurrence of acute poisoning symptoms compared with controls	increased @ 132 and 264 g/ha	fv	35
CARBOFURAN	0, 132, 264 g carbofuran/ha	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain cholinesterase activities compared with controls	decreased @ 132 g/ha (150, 300 m exposure distances), 264 g/ha (all exposure distances)	fw	35
CARBOFURAN	0, 132, 264 g carbofuran/ha	TOX-Non-Repro-Sublethal - whole animal	growth rate to four weeks of age compared with controls	no effect	fx	35
CHLOROETHYLMERCURY	0, 500 mg/kg bw	TOX-REPRO - physiology	post-dose eggshell thickness versus pre-dose thickness	decreased @ 500 mg/kg bw	fy	15
CHLORPYRIFOS	0, 56, 100, 178, 316, 562 ppm diet	TOX-MORT - toxicity benchmarks	11 day dietary LC10	236 ppm	fz	36
CHLORPYRIFOS	0, 56, 100, 178, 316, 562 ppm diet	TOX-MORT - toxicity benchmarks	11 day dietary LC50	357 ppm	ga	36
CHLORPYRIFOS	0, 112, 200, 356, 632, 1124 ppm diet (initial concentrations; declined over 11 day treatment period)	TOX-MORT - toxicity benchmarks	5 day dietary LC50, when 5 day residue half life was simulated	644 ppm (declining to 141 ppm over 11 d)	gb	36
CHLORPYRIFOS	NR	TOX-MORT - toxicity benchmarks	LD50	145 mg/kg	gc	5
CHLORPYRIFOS	NR	TOX-MORT - toxicity benchmarks	LD50	29.4 mg/kg	gd	5
CHLORPYRIFOS	NR	TOX-MORT - toxicity benchmarks	LD50	50.4 mg/kg	ge	5
CHLORPYRIFOS	NR	TOX-MORT - toxicity benchmarks	LD50	83.3 mg/kg	gf	5
CHLORPYRIFOS	0, 56, 100,178, 316, 562 ppm diet	TOX-Non-Repro-Sublethal - behavioral effects	food consumption compared with controls	decreased @ all doses	gg	36
CHLORPYRIFOS	0, 112, 200, 356, 632, 1124 ppm diet (initial concentrations; declined over 11 day treatment period)	TOX-Non-Repro-Sublethal - behavioral effects	food consumption compared with controls	decreased @ all doses	gh	36
CHLORPYRIFOS	0, 80 (+/- 10%) ppm	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain acetylcholinesterase activity compared to controls	decreased	gi	37

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
CHLORPYRIFOS	0, 80 (+/- 10%) ppm	TOX-Non-Repro-Sublethal - whole animal	body weight compared to controls	decreased	gj	37
CHLORPYRIFOS	0, 56, 100, 178, 316, 562 ppm diet	TOX-Non-Repro-Sublethal - whole animal	body weight compared with controls	decreased @ all doses	gk	36
CHLORPYRIFOS	0, 112, 200, 356, 632, 1124 ppm diet (initial concentrations; declined over 11 day treatment period)	TOX-Non-Repro-Sublethal - whole animal	body weight compared with controls	decreased @ all doses	gl	36
CHLORPYRIFOS	0, 80 (+/- 10%) ppm	TOX-REPRO - physiology	number of eggs produced, egg weight, eggshell thickness compared to controls	decreased	gm	37
CHLORPYRIFOS	0, 80 (+/- 10%) ppm	TOX-REPRO - reproductive success	fertility and hatchability of eggs, and duckling survival to 14 days	no effect	gn	37
COREXIT 9527	control, 0.006, 0.012, 0.025, 0.05 ml/kg, daily; diluted in water	TOX-MORT - dose-response data	% mortality, compared to controls	no effect	go	38
COREXIT 9527	control, 0.015%	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma alanine aminotransferase activity, compared to control	increase	gp	39
COREXIT 9527	control, 0.015%	TOX-Non-Repro-Sublethal - whole animal	body weight	no effect	gq	39
COREXIT 9527	control, 0.006, 0.012, 0.025, 0.05 ml/kg, daily; diluted in water	TOX-Non-Repro-Sublethal - whole animal	body weight, compared to controls	no effect	gr	38
CRUDE OILS	control, 1.0, 2.5, 4.0, 7.0, 12.0 ml/kg South Louisiana crude oil, daily	TOX-MORT - dose-response data	% mortality, compared to controls	no effect	gs	38
CRUDE OILS	0, 0.025, 0.25, 2.5, 5% south Louisiana crude oil	TOX-Non-Repro-Sublethal - behavioral effects	distance retreated from a frightening stimulus; impaired avoidance behavior	decrease @ 0.25 - 5%	gt	40
CRUDE OILS	control, 0.15% Prudhoe Bay crude oil	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hematocrit and plasma cholesterol concentration, compared to control (based on treatment means at 3, 6, 9 wks)	decrease	gu	39
CRUDE OILS	control or 5 ml Statfjord crude oil/kg/d	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic cytochrome P450 content	56% increase	gv	41
CRUDE OILS	control, 1%, 3% (ml oil/100 g dry wt food); South Louisiana and Prudhoe Bay crude oil	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic microsomal naphthalene metabolism (nmol/min/mg protein), compared to control, in adult females and in neonatal ducklings hatched from eggs laid by females (1% Prudhoe Bay dose level was not significantly different for neonates).	increase @ 1% and 3%	gw	42
CRUDE OILS	control, 0.5, 1, 3% (ml South Louisiana crude oil/ 100 g dry food)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic microsomal naphthalene metabolism (nmol/min/mg protein)	increase @ 0.5, 1, 3%	gx	43
CRUDE OILS	0, 0.025, 0.25, 2.5, 5% south Louisiana crude oil	TOX-Non-Repro-Sublethal - cellular/biochemical effects	incidence of liver hypertrophy and splenic atropy	increase @ 2.5 - 5%	gy	40
CRUDE OILS	0, 0.025, 0.25, 2.5, 5% south Louisiana crude oil	TOX-Non-Repro-Sublethal - cellular/biochemical effects	pathological release of ornithine carbamyltransferase from kidney	increase @ 0.025 - 5%	gz	40
CRUDE OILS	0, 0.025, 0.25, 2.5, 5% south Louisiana crude oil	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma alanine aminotransferase activity, from liver	increase @ 0.25 - 5.0%	ha	40
CRUDE OILS	control, 3% (3 ml South Louisiana crude oil/ 100 g dry food)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma corticosterone concentration, compared to control	decrease @ 3%	hb	43
CRUDE OILS	control, 0.5, 1, 3% (ml South Louisiana crude oil/ 100 g dry food)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma corticosterone concentration, compared to control	decrease @ 0.5, 1, 3%	hc	43
CRUDE OILS	control, 0.5, 1, 3% (ml South Louisiana crude oil/ 100 g dry food)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma corticosterone concentration, compared to control	decrease @ 0.5%	hd	43

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
CRUDE OILS	control, 0.15% Prudhoe Bay crude oil	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma triglyceride and sodium concentrations, compared to control (based on treatment means at 3, 6, 9 wks)	increase	he	39
CRUDE OILS	control or 5 ml Statfjord crude oil/kg/d	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma triiodothryonine concentration	53% increase	hf	41
CRUDE OILS	0, 0.025, 0.25, 2.5, 5% south Louisiana crude oil	TOX-Non-Repro-Sublethal - organ/system effects	hematocrit, compared to control	decrease @ 2.5 - 5%	hg	40
CRUDE OILS	0, 0.025, 0.25, 2.5, 5% south Louisiana crude oil	TOX-Non-Repro-Sublethal - organ/system effects	incidence of degeneration of kidney tubules	increase @ 5%	hh	40
CRUDE OILS	control, 2.5, 4.0 ml/kg South Louisiana crude oil, daily	TOX-Non-Repro-Sublethal - organ/system effects	susceptibility to Pasturella multocida estimated as % mortality 2-wks post-exposure to Pasturella multocida which was given on day 28	increase @ 4.0 ml/kg	hi	38
CRUDE OILS	control, 5 ml/kg bird/d Statfjord A crude oil	TOX-Non-Repro-Sublethal - whole animal	body temperature at an ambient temperature of -17C, compared to control	increase	hj	44
CRUDE OILS	control or 5 ml Statfjord crude oil/kg/d	TOX-Non-Repro-Sublethal - whole animal	body weight	no effect	hk	41
CRUDE OILS	control, 0.5, 1, 3% (ml South Louisiana crude oil/ 100 g dry food)	TOX-Non-Repro-Sublethal - whole animal	body weight	increase @ 3%	hl	43
CRUDE OILS	control, 0.15% Prudhoe Bay crude oil	TOX-Non-Repro-Sublethal - whole animal	body weight	no effect	hm	39
CRUDE OILS	control, 1.0, 2.5, 4.0, 7.0, 12.0 ml/kg South Louisiana crude oil, daily	TOX-Non-Repro-Sublethal - whole animal	body weight, gross lesions or signs of clinical illness, compared to controls	no effect	hn	38
CRUDE OILS	control, 5 ml/kg bird/d Statfjord A crude oil	TOX-Non-Repro-Sublethal - whole animal	body weight; body and skin temperature at 16C; mean heat production and thermal conductance at 16C	no effect	ho	44
CRUDE OILS	control, 0.5, 1, 3% (ml South Louisiana crude oil/ 100 g dry food)	TOX-Non-Repro-Sublethal - whole animal	daily food intake rate	increase @ 1 and 3%	hp	43
CRUDE OILS	0, 0.025, 0.25, 2.5, 5% south Louisiana crude oil	TOX-Non-Repro-Sublethal - whole animal	growth rate, estimated as change in body weight, compared to control	decrease @ 5%	hq	40
CRUDE OILS	0.1 or 0.4 ml Statfjord crude oil with Finasol OSR-5 or OSR-12 dispersant/L water	TOX-Non-Repro-Sublethal - whole animal	metabolic heat production (watts/kg), compared to pre-contamination levels	increase	hr	45
CRUDE OILS	0, light, moderate, and heavy exposure	TOX-Non-Repro-Sublethal - whole animal	thermal conductance of feathers and body heat loss versus controls	increased with light, moderate and heavy oiling	hs	46
CRUDE OILS	control, 1, 5, 10 ul South Louisiana crude oil applied externally to eggs	TOX-REPRO - development	% abnormal survivors, compared to controls	increase @ 1, 5 ul	ht	47
CRUDE OILS	control, 1, 5, 10 ul South Louisiana crude oil applied externally to eggs	TOX-REPRO - development	18-d % survival, mean embryonic weight, crown-rump length (5ul) and bill length	decrease @ 1, 5, 10 ul	hu	47
CRUDE OILS	0, 1, or 5 uL	TOX-REPRO - development	bill length of both sexes	decreased @ 1, 5 uL/egg	hv	48
CRUDE OILS	0, 1, or 5 uL	TOX-REPRO - development	embryo survival to 18 days	decreased to 65% @ 1 uL/egg); 9% @ 5 uL/egg	hw	48
CRUDE OILS	0, 1, or 5 uL	TOX-REPRO - development	embryonic weight (females) and crown rump length (both sexes)	decreased @ 5 uL/egg	hx	48

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
CRUDE OILS	0, 2, 5, 15 ul waste crankcase oil/egg	TOX-REPRO - development	incidence of survivors with abnormalities versus controls	increase @ 2-15 ul/egg	hy	49
CRUDE OILS	control, 3 ml South Louisiana crude oil/100 g diet, dry weight	TOX-REPRO - physiology	clutch size	no effect	hz	50
CRUDE OILS	control, 2% south Louisiana crude oil (w/w)	TOX-REPRO - physiology	egg weight, length and breadth, compared to control	decrease	ia	51
CRUDE OILS	control, 3 ml South Louisiana crude oil/100 g diet, dry weight	TOX-REPRO - physiology	length of reproductive cycle; due to prolonged phase of gonadal maturation	increase	ib	50
CRUDE OILS	control, 0.5% (w/w) South Louisiana crude oil	TOX-REPRO - physiology	onset of laying, egg production, egg fertility, compared to controls	no effect	ic	52
CRUDE OILS	control, 3 ml South Louisiana crude oil/100 g diet, dry weight	TOX-REPRO - physiology	plasma prolactin levels during oviposition, early incubation and post-natal care	decrease	id	50
CRUDE OILS	0, 2, 5, 15 ul waste crankcase oil/egg	TOX-REPRO - physiology	red blood cell and liver ALAD activity and hemoglobin concentration, compared to controls	decrease @ 15 ul/egg	ie	49
CRUDE OILS	0, 2, 5, 15 ul waste crankcase oil/egg	TOX-REPRO - physiology	red blood cell and liver ALAD activity, hemoglobin concentration, plasma uric acid, and plasma ALT and AST activities compared to controls	decrease @ 5, 15 ul/egg	if	49
CRUDE OILS	0 or 3 ml S. Louisiana crude oil/ 100 g dry wt. food	TOX-REPRO - reproductive success	% fertile eggs and # of ducklings; when male, female or both male and female exposed to oil, compared to control	decrease	ig	53
CRUDE OILS	control, 3 ml South Louisiana crude oil/100 g diet, dry weight	TOX-REPRO - reproductive success	% hatchability (53% @ 3ml/100g vs 71% in controls)	decrease	ih	50
CRUDE OILS	control, 0.5% (w/w) South Louisiana crude oil	TOX-REPRO - reproductive success	egg hatchability (# eggs hatching/# fertile eggs), compared to controls	decrease	ii	52
CRUDE OILS	0, 2, 5, 15 ul waste crankcase oil/egg	TOX-REPRO - reproductive success	percent mortality versus controls	increase @ 2-15 ul/egg	ij	49
CRUDE OILS; FUEL OILS	control, 4.0 ml/kg South Louisiana crude oil or Bunker C fuel oil, daily	TOX-Non-Repro-Sublethal - organ/system effects	antibody-mediated immunity estimated by direct spleen plaque-forming cell assays (PFCs/g spleen); mallards inoculated with sheep red blood cells on day 24	no effect	ik	38
CYANIDE	0,0.25,0.5,1.0,2.0 mg/kg bw (as KCN)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	ATP levels in heart versus controls	no effect	il	54
CYANIDE	0,0.25,0.5,1.0,2.0 mg/kg bw (as KCN)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	ATP levels in liver and brain tissues versus controls	decreased @ all doses	im	54
CYANIDE	0,0.5,1,2 mg/kg bw (as KCN)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	respiratory control ratios in heart, liver and brain versus controls	decreased @ 0.5,1,2 mg/kg bw	in	55
CYANIDE	0,1.0 mg/kg bw (as KCN)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	rhodanese and 3-mercaptopyruvate sulfurtransferase activities in brain versus controls	increased	io	54
CYANIDE	0,1.0 mg/kg bw (as KCN)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	rhodanese and 3-mercaptopyruvate sulfurtransferase activities in liver and heart versus controls	no effect	ip	54
CYANIDE	0,1,2 mg/kg bw (as KCN)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	serum creatine kinase activity versus controls	increased @ 1, 2 mg/kg bw	iq	55
CYANOFENPHOS	0, 0.5, 1.0, 2.0, 4.0, 8.0 mg/kg/d	TOX-MORT - dose-response data	mortality versus controls)	increased (30% @ 10 mg leptophos/kg/d; 10% @ 0.5 mg cyanofenphos/kg/d; 0% @ 1.0 mg cyanofenphos/kg/d; 20% @ 2.0 mg cyanofenphos/kg/d ;60% @ 4.0 mg cyanofenphos/kg/d; 100% @ 8.0 mg cyanofenphos/kg/d	ir	56

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
CYANOFENPHOS	0, 0.5, 1.0, 2.0, 4.0, 8.0 mg/kg/d	TOX-MORT - dose-response TOX-Non-Repro-Sublethal - organ/system effects	incidence of histological lesions in axons and myelin sheaths	increased @ 2.0, or 4.0 mg cyanofen/kg/d, 10 mg leptophos/kg/d.	is	56
CYANOFENPHOS	0, 0.5, 1.0, 2.0, 4.0, 8.0 mg/kg/d	TOX-Non-Repro-Sublethal - whole animal	bw versus controls	decreased @ 2.0, 4.0 mg/kg/d	it	56
CYANOFENPHOS	0, 0.5, 1.0, 2.0, 4.0, 8.0 mg/kg/d	TOX-Non-Repro-Sublethal - whole animal	incidence of delayed neurotoxicity signs	increased	iu	56
DDE (4,4'-)	0, 40 ppm DDE	TOX-EXP IND - accumulation	DDE residue concentrations in eggs	373 (95% CL; 152-574) ppm lipid basis @ 40 ppm diet	iv	13
DDE (4,4'-)	40 ppm DDE	TOX-EXP IND - accumulation	DDE residues in whole carcass, egg contents, and brain	78.2 (carcass); 61.6 (egg); 4.1 (brain) ppm, wet wt	iw	57
DDE (4,4'-)	control or 100 ppm DDE	TOX-EXP IND - accumulation	mean (+/- SE) DDE levels (ppm wet weight)	10.6 +/- 2.2 ppm nasal gland, 16.1 +/- 5.1 ppm liver, 5.8 +/- 1.1 ppm kidney, 1.9 +/- 0.1 ppm brain @ 100 ppm diet	ix	58
DDE (4,4'-)	control, 40 mg/kg dry weight diet	TOX-EXP IND - accumulation	mean +/- SE p,p'-DDE concentration in shell gland mucosa	1.23 +/- 0.12 ug/g wet weight	iy	59
DDE (4,4'-)	0, 3 mg/kg diet	TOX-EXP IND - accumulation	mean and range of DDE egg concentrations	0.021 - 0.028 ppm wet wt @ 0 ppm; 5.8 (0.32 SE; range 4.28-7.23) ppm wet wt @ 3 ppm	iz	60
DDE (4,4'-)	control, 40 mg/kg dry weight	TOX-EXP IND - accumulation	mean DDE concentrations	38 ug/g wet weight egg (yolk + white), 1.20 ug/g wet weight egg shell gland mucosa @ 40 mg/kg	ja	61
DDE (4,4'-)	0, 3, 30, 100 ug/g diet	TOX-EXP IND - accumulation	mean egg yolk concentrations after 37-42 d on DDE diet	10.3 (0.9 SE) ug/g wet wt. @ 3 ug/g diet; 91.5 (1.5 SE) @ 30 ug/g diet; 332.0 (26.0 SE) @ 100 ug/g diet	jb	62
DDE (4,4'-)	0, 40 ppm	TOX-Non-Repro-Sublethal - behavioral effects	food consumption rate (174 g/d) compared to control (173 g/d)	no effect	jc	13
DDE (4,4'-)	0, 3, 30, 100 ug/g diet	TOX-Non-Repro-Sublethal - behavioral effects	mean daily food consumption rate (166.4 g food/kg body weight)	no effect	jd	62
DDE (4,4'-)	control or 100 ppm DDE	TOX-Non-Repro-Sublethal - cellular/biochemical effects	nasal gland and kidney Na-K-ATPase activity, following exposure to 100% seawater	no effect	je	58
DDE (4,4'-)	0, 10, 100, 1000 mg/kg diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	salt gland excretion volume, compared to controls	36-67% decrease @ 10-1000 ppm	jf	63
DDE (4,4'-)	0, 10 ppm	TOX-Non-Repro-Sublethal - cellular/biochemical effects	serum calcium after PTH injection versus controls	no effect	jg	64
DDE (4,4'-)	0, 10 ppm	TOX-Non-Repro-Sublethal - cellular/biochemical effects	serum calcium versus controls	17% decrease	jh	64
DDE (4,4'-)	control, 10, 50 ppm DDE	TOX-Non-Repro-Sublethal - organ/system effects	nasal gland secretion volume	no effect	ji	58
DDE (4,4'-)	control, 40 mg/kg dry weight diet	TOX-Non-Repro-Sublethal - organ/system effects	plasma calcium concentration	no effect	jj	59
DDE (4,4'-)	0, 3, 30, 100 ug/g diet	TOX-Non-Repro-Sublethal - whole animal	body weight at end of study	no effect	jk	62
DDE (4,4'-)	control, 10-100 ppm DDE	TOX-Non-Repro-Sublethal - whole animal	body weight or plasma electrolyte levels	no effect	jl	58

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
DDE (4,4'-)	0, 3 mg/kg diet (adults)	TOX-REPRO - behavior	behavior of offspring; latency in response to approach a maternal call and distance travelled from a frightening stimulus	no effect	jm	60
DDE (4,4'-)	0, 3 mg/kg diet (adults)	TOX-REPRO - behavior	decrease in distance traveled in those offspring that traveled more than 10 cm from a frightening stimulus	decrease @ 3ppm	jn	60
DDE (4,4'-)	0, 3 mg/kg diet (adults)	TOX-REPRO - behavior	responsiveness of offspring to maternal call; % that approached call and % that spent 100% of time near call after initial approach	increase @ 3 ppm	jo	60
DDE (4,4'-)	0, 10, or 40 ppm	TOX-REPRO - development	% normal hatchlings versus controls	decreased	jp	65
DDE (4,4'-)	0, 10, or 40 ppm	TOX-REPRO - physiology	% cracked eggs versus controls	increased	jq	65
DDE (4,4'-)	control, 40 mg/kg dry weight	TOX-REPRO - physiology	Ca2+-Mg2+ ATPase activity in eggshell gland mucosa homogenates, compared to controls	32% decrease @ 40 mg/kg	jr	61
DDE (4,4'-)	control, 40 mg/kg dry weight	TOX-REPRO - physiology	calcium content (umol/g dry weight) of eggshell gland mucosa, compared to controls	44% increase @ 40 mg/kg	js	61
DDE (4,4'-)	control, 40 mg/kg dry weight diet	TOX-REPRO - physiology	calcium content of secreted fluid in the shell gland, compared to control	25% decrease @ 40 mg/kg	jt	59
DDE (4,4'-)	0, 3, 30, 100 ug/g diet	TOX-REPRO - physiology	egg production during study period	no effect	ju	62
DDE (4,4'-)	control, 10 ppm DDE	TOX-REPRO - physiology	egg weight, length or breadth, compared to control	no effect	jv	51
DDE (4,4'-)	control, 40 mg/kg dry weight diet	TOX-REPRO - physiology	eggshell index (shell weight/shell length x breadth), compared to control	28% decrease @ 40 mg/kg	jw	59
DDE (4,4'-)	control, 40 mg/kg dry weight	TOX-REPRO - physiology	eggshell index (shell weight/length x breadth), compared to control	18% decrease @ 40 mg/kg	jx	61
DDE (4,4'-)	0, 10 ppm	TOX-REPRO - physiology	eggshell thickness versus controls	20.4% decrease	jy	64
DDE (4,4'-)	0, 10, or 40 ppm	TOX-REPRO - physiology	eggshell thickness versus controls	decreased	jz	65
DDE (4,4'-)	0, 3, 30, 100 ug/g diet	TOX-REPRO - physiology	eggshell thickness, compared to controls	2 - 17% decrease @ 3-100 ug/g	ka	62
DDE (4,4'-)	0, 40 ppm	TOX-REPRO - physiology	eggshell thickness, compared to control	17% decrease	kb	13
DDE (4,4'-)	control, 5 ppm	TOX-REPRO - physiology	onset of laying, egg production, egg fertility and egg hatchability, compared to controls	no effect	kc	52
DDE (4,4'-)	0, 500, 1000, 5000 mg/kg bw	TOX-REPRO - physiology	post-dose eggshell thickness versus pre-dose thickness	decreased @ 500, 1000, 5000 mg/kg bw	kd	15
DDE (4,4'-)	0, 3, 30, 100 ug/g diet	TOX-REPRO - physiology	regression equation relating shell thickness (mm) to log10 yolk concentration (C, ug/g); r2=0.54	ST = 0.986 - 0.060C	ke	62
DDE (4,4'-)	0, 10, or 40 ppm	TOX-REPRO - reproductive success	number of 14-day old ducklings per hen versus controls	decreased	kf	65
DDE (4,4'-); DDT (4,4'-)	0, 10, 50 ppm DDT, DDE, DDT-SO4 or DDE-SO4	TOX-REPRO - physiology	figure of eggshell thickness over 30 d period (significant differences noted at various times)	see citation	kg	66
DDE (4,4'-); DIELDRIN; OXYCHLORDANE; POLYCHLORINATED BIPHENYLS	in ppm wet wt, carcass, after 100 d exposure: 0.08 (dieldrin); 0.18 (oxychlordane); 0.09 (DDE), 16.56 (total PCBs)	TOX-EXP IND - biomarkers	relationship between BROD, PROD, and EROD activities and total PCB, oxychlordane, and TEQs concentrations	positive correlation	kh	67

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
DDE (4,4'-); DIELDRIN; OXYCHLORDANE; POLYCHLORINATED BIPHENYLS	in ppm wet wt, carcass, after 100 d exposure: 0.08 (dieldrin); 0.18 (oxychlordane); 0.09 (DDE), 16.56 (total PCBs)	TOX-EXP IND - biomarkers	relationships between EROD activity and dieldrin concentrations	positive correlation	ki	67
DDE (4,4'-); LEAD COMPOUNDS; MERCURY COMPOUNDS	0, 40 ppm DDE, 100 ppm lead, or 200 ppm N-(ethylmercury)-p-toluene sulfoanilide	TOX-REPRO - physiology	eggshell thickness versus controls	decreased @ 40 ppm DDE	kj	57
DDE (4,4'-); LEAD COMPOUNDS; MERCURY COMPOUNDS	0, 40 ppm DDE + 100 ppm lead, or 40 ppm DDE + 200 ppm N-(ethylmercury)-p-toluene sulfoanilide	TOX-REPRO - physiology	eggshell thickness versus controls	decreased with both treatments	kk	57
DDE (4,4'-); METHYLMERCURY CHLORIDE	1, 5 ppm Hg; both doses given with and w/out 5 ppm DDE	TOX-EXP IND - accumulation	Hg concentration in breast muscle (mean +/- SE)	1.0 +/- 0.06 (@ 1 ppm Hg, no DDE), 5.3 +/- 0.56 (@ 5 ppm Hg, no DDE) ppm Hg, wet wt	kl	68
DDE (4,4'-); METHYLMERCURY CHLORIDE	1, 5 ppm Hg; both doses given with and w/out 5 ppm DDE	TOX-EXP IND - accumulation	mean Hg concentration in third egg laid in clutch (mean +/- SE)	1.4 +/- 0.18 (@ 1 ppm, no DDE), 8.7 +/- 0.87 (@ 5 ppm, no DDE) ppm Hg, wet wt	km	68
DDT (4,4'-)	0, 2, 20, 200 mg/kg diet	TOX-EXP IND - accumulation	DDT and DDE concentrations in egg dry matter ranging from 0-14 d to 330 - 343 d sampling periods at 4 dietary doses	DDT <0.1, DDE 0.2 - 1.2 ug/g dry wt @ 0 ppm; DDT 0.6 - 2.4, DDE 1.2 - 10.1 @ 2 ppm; DDT 2.2 - 29.2, DDE 15.7 - 153.5 @ 20 ppm; DDT 14.9 - 102.0, DDE 45.0 - 187.0 @ 200 ppm	kn	69
DDT (4,4'-)	0, 330, 500, 750, 1100, 1650, 2500 mg/kg diet	TOX-MORT - toxicity benchmarks	5 day dietary LC50	1550 ppm	ko	19
DDT (4,4'-)	0, 330, 500, 750, 1100, 1650, 2500 mg/kg diet	TOX-Non-Repro-Sublethal - behavioral effects	food consumption compared with controls	decreased @ all doses	kp	19
DDT (4,4'-)	0, 2, 20, 200 mg/kg diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic microsomal enzyme activity (aniline hydroxylase and aminopyrine N-demethylase)	no effect	kq	69
DDT (4,4'-)	0, 100, 200 ug/g diet	TOX-Non-Repro-Sublethal - whole animal	body weight at end of experiment	no effect	kr	70
DDT (4,4'-)	0, 330, 500, 750, 1100, 1650, 2500 mg/kg diet	TOX-Non-Repro-Sublethal - whole animal	body weight gain by 8 days compared with controls	decreased @ all doses	ks	19
DDT (4,4'-)	0, or 50 ppm	TOX-REPRO - physiology	Ca - ATPase activity in eggshell glands versus controls	no effect	kt	71
DDT (4,4'-)	0, or 50 ppm DDT	TOX-REPRO - physiology	calcium concentration in eggshell versus controls	no effect	ku	71
DDT (4,4'-)	0, 50 ppm	TOX-REPRO - physiology	eggshell quality (R-value) versus controls	decreased	kv	71
DDT (4,4'-)	0, 50 ppm	TOX-REPRO - physiology	eggshell thickness versus controls	decreased	kw	71
DDT (4,4'-)	0, 2, 20, 200 mg/kg	TOX-REPRO - physiology	eggshell thickness, weight and calcium concentration	decrease @ 20 - 200 ppm	kx	72
DDT (4,4'-)	0, 75 ppm	TOX-REPRO - physiology	eggshell thickness, compared to controls	13.8% decrease	ky	73
DDT (4,4'-)	0, 50 ppm	TOX-REPRO - physiology	eggshell weight and thickness, total eggshell calcium and shell gland epithelial microsomal Ca-ATPase activity, compared to controls	decreased	kz	74
DDT (4,4'-)	0, 50 ppm	TOX-REPRO - physiology	eggshell weight versus controls	decreased	la	71

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
DDT (4,4'-)	0, 100, 200 ug/g diet	TOX-REPRO - physiology	estradiol metabolism and cytochrome P450 concentration	increase @ 100-200 ug/g	lb	70
DDT (4,4'-)	0, or 50 ppm	TOX-REPRO - physiology	total Ca/eggshell	no effect	lc	71
DDT (4,4'-)	0, 2, 20, 200 mg/kg diet	TOX-REPRO - reproductive success	fertility, hatchability and duckling weight	no effect	ld	69
DDT (Technical Grade Mixture)	0, 2, 20, 200 mg/kg diet	TOX-EXP IND - accumulation	DDT and DDE concentrations in egg dry matter ranging from 0-14 d to 330 - 343 d sampling periods at 4 dietary doses	DDT <0.1, DDE 0.2 - 1.2 ug/g dry wt @ 0 ppm; DDT 0.3 - 4.2, DDE 1.0 - 12.7 @ 2 ppm; DDT 1.3 - 25.0, DDE 5.0 - 110.1 @ 20 ppm; DDT 25.5 - 254, DDE 58.0 - 1234 @ 200 ppm	le	69
DDT (Technical Grade Mixture)	0.2 lb/acre	TOX-EXP IND - accumulation	table of DDE, DDD and DDT residues in 21 tissues following varying times after application	see citation	lf	75
DDT (Technical Grade Mixture)	0, 0.025, 0.05, 0.1, 0.2, 0.4%	TOX-MORT - dose-response data		increase @ 0.05 - 0.4% in diet	lg	76
DDT (Technical Grade Mixture)	0, 2, 20, 200 mg/kg	TOX-MORT - dose-response data		increase @ 200 ppm	lh	72
DDT (Technical Grade Mixture)	0, 2, 20, 200 mg/kg diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic microsomal enzyme activity (aniline hydroxylase and aminopyrine N-demethylase)	no effect	li	69
DDT (Technical Grade Mixture)	0, 2, 20, 200 mg/kg	TOX-REPRO - physiology	eggshell thickness, weight and calcium concentration	decrease @ 20 - 200 ppm	lj	72
DDT (Technical Grade Mixture)	0, 2, 20, 200 mg/kg diet	TOX-REPRO - reproductive success	fertility, hatchability and duckling weight	no effect	lk	69
DEMETON	NR	TOX-MORT - toxicity benchmarks	LD50's determined at ages 36 hr, 7 d, 30 d, and 6 mos, respectively (95% CI in parenth.)	13.3 (11.0-16.2), 15.3 (12.9-18.1), 15.1 (12.0-19.0), 8.19 (6.58-10.2)	ll	5
DIAZINON	183 ug/g ingesta	TOX-EXP IND - biomarkers	percent inhibition of post-mortem brain cholinesterase activity compared to control	decreased (84%)	lm	20
DIAZINON	1.5, 15 lb/acre simulated, aqueous	TOX-MORT - toxicity benchmarks	LC50, exposed on day 3 or 8 of incubation	74 (day 3), 79 (day 8) lb/acre LC50	ln	77
DIAZINON	0, 0.2, 2.0 lb/acre simulated, oil	TOX-MORT - toxicity benchmarks	LC50, exposed on day 3 or 8 of incubation	9.7 (day 3), 11.1 (day 8) lb/acre	lo	77
DIAZINON	0, 0.2, 2.0 lb/acre simulated, oil	TOX-REPRO - development	crown-rump length at day 18 of incubation compared with controls	decreased @ 2.0 lb/acre	lp	77
DIAZINON	0, 1.5, 15.0 lb/acre simulated, aqueous; 0, 0.2, 2.0 lb/acre simulated, oil	TOX-REPRO - development	embryo weight by day 18 of incubation compared with controls	decreased @ 15 (aqueous), 2.0 (oil) lb/acre	lq	77
DIAZINON; MALATHION; PARATHION	125 (malathion), 15 (diazinon), 7.5 (parathion) lb/acre simulated, aqueous; 14 (malathion), 2 (diazinon), 0.8 (parathion) lb/acre simulated, oil	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain or plasma cholinesterase activity in embryos or hatchlings compared to controls	decreased @ all doses	lr	77
DICHLOROPHENOXY-ACETIC ACID (2,4-)	0, 1500 mg/kg bw	TOX-REPRO - physiology	post-dose eggshell thickness versus pre-dose thickness	decreased @ 1500 mg/kg bw	ls	15
DICOFOL	0, 3, 10, 30, 100 ug/g diet	TOX-EXP IND - accumulation	mean egg yolk concentrations of p,p'-dicofol after 37-42 d on dicofol diet	5.4 (0.3 SE) ug/g wet wt. @ 3 ug/g diet; 18.1 (1.2 SE) @ 10 ug/g diet; 37.1 (1.6 SE) @ 30 ug/g diet; 150.7 (9.9SE) @ 100 ug/g diet,	lt	62

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
DICOFOL	0, 3, 10, 30, 100 ug/g diet	TOX-Non-Repro-Sublethal - behavioral effects	mean daily food consumption rate (169.8 g food/kg body weight)	no effect	lu	62
DICOFOL	0, 3, 10, 30, 100 ug/g diet	TOX-Non-Repro-Sublethal - whole animal	body weight at end of study	no effect	lv	62
DICOFOL	0, 3, 10, 30, 100 ug/g diet	TOX-REPRO - physiology	egg production during study period	no effect	lw	62
DICOFOL	0, 3, 10, 30, 100 ug/g diet	TOX-REPRO - physiology	eggshell thickness, compared to controls	2-12% decrease @ 10-100 ug/g	lx	62
DICOFOL	0, 3, 10, 30, 100 ug/g diet	TOX-REPRO - physiology	incidence of cracked and soft shelled eggs	increase @ 100 ug/g	ly	62
DICOFOL	0, 3, 10, 30, 100 ug/g diet	TOX-REPRO - physiology	regression equation relating shell thickness (mm) to log10 yolk concentration (C, ug/g); r2=0.39	ST = 1.020 - 0.056C	lz	62
DICROTOPHOS	0, 5 mg/L in water of dietary tadpoles (96 hours)	TOX-MORT - dose-response data	percent mortality	0% @ 5 mg/L	ma	3
DICROTOPHOS	0, 40, 55, 76, 105, 145, 200 ppm diet	TOX-MORT - toxicity benchmarks	5 day dietary LC50	101.8 (coeff. of variation = 21.6%)	mb	78
DICROTOPHOS	0, 120, 158, 209, 276, 360 ppm diet	TOX-MORT - toxicity benchmarks	5 day dietary LC50	506.7 (coeff. of variation = 40.3%)	mc	78
DICROTOPHOS	NR	TOX-MORT - toxicity benchmarks	LD50's determined at ages 36 hr, 7 d, 30 d, and 6 mos, respectively (95% CI in parenth.)	6.17 (3.33-11.4), 7.03 (5.30-9.31), 6.73 (5.53-8.19), 4.14 (3.33-5.16)	md	5
DICROTOPHOS	0, 40, 55, 76, 105, 145, 200 ppm diet	TOX-Non-Repro-Sublethal - behavioral effects	consumption of treated diet compared with controls	decreased @ 55 and 145 ppm	me	78
DICROTOPHOS	0, 5 mg/L in water of dietary tadpoles (96 hours)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain acetylcholinesterase activity compared with controls	70.1% @ 5 mg/L	mf	3
DICROTOPHOS	0, 2.4 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain cholinesterase inhibition compared with controls	42.8% (5.4 SE)	mg	2
DICROTOPHOS	0, 2.4 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	maximal brain acetylcholinesterase activity inhibition compared to control (4 hrs post-dose)	63%	mh	79
DICROTOPHOS; FENTHION	16 mg dicrotophos/kg diet OR 17 mg fenthion/kg diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	maximal brain acetylcholinesterase activity inhibition compared to control (after 3 days treatmentt)	68-78%	mi	79
DIELDRIN	0, 4, 10, and 30 ppm Dieldrin	TOX-EXP IND - accumulation	brain, liver, and adipose dieldrin concentrations	increased with all doses	mj	80
DIELDRIN	0, 1, 5, 10 mg/kg diet	TOX-EXP IND - accumulation	dieldrin concentrations in egg dry matter ranging from 0-14 d to 330 - 343 d sampling periods at 4 dietary doses	0.3 ug/g dry wt. @ 0 ppm; 0.9 - 5.0 @ 1 ppm; 4.1 - 40.1 @ 5ppm; 6.1 - 78.5 @ 10 ppm	mk	69
DIELDRIN	0, 0.3, 16, 48, 155, 272, 606 ug/g diet	TOX-EXP IND - accumulation	figures of tissue dieldrin concentrations at different exposure times and doses	see citation	ml	81
DIELDRIN	<0.2, 2.6, 26.2, 49.3 ug/g diet	TOX-EXP IND - accumulation	mean of day 5, 7, 8 (approx. steady state) tissue concentrations	9.7 ug/g lipid, 3.3 ug/g skin, 1.3 ug/g brain, 0.8 ug/g liver, 0.7 ug/g muscle at 2.6 ug/g food	mm	82
DIELDRIN	<0.2, 2.6, 26.2, 49.3 ug/g diet	TOX-EXP IND - accumulation	mean of day 5, 7, 8 (approx. steady state) tissue concentrations	42.5 ug/g lipid, 14.6 ug/g skin, 1.6 ug/g brain, 2.5 ug/g liver, 1.2 ug/g muscle at 26.2 ug/g food	mn	82
DIELDRIN	<0.2, 2.6, 26.2, 49.3 ug/g diet	TOX-EXP IND - accumulation	mean of day 5, 7, 8 (approx. steady state) tissue concentrations	80.7 ug/g lipid, 30.1 ug/g skin, 1.6 ug/g brain, 4.1 ug/g liver, 1.8 ug/g muscle at 49.3 ug/g food	mo	82

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
DIELDRIN	0, 0.014, 0.019, 0.052, 0.075, 0.118, 0.177, 0.193 mg/L	TOX-EXP IND - accumulation	steady state bioconcentration factor for lipid, calculated on a wet weight basis; range for 7 doses	706 - 1,995	mp	81
DIELDRIN	0, 0.014, 0.019, 0.052, 0.075, 0.118, 0.177, 0.193 mg/L	TOX-EXP IND - accumulation	steady state bioconcentration factor for skin, calculated on a wet weight basis; range for 7 doses	178 - 684	mq	81
DIELDRIN	0, 0.014, 0.019, 0.052, 0.075, 0.118, 0.177, 0.193 mg/L	TOX-EXP IND - accumulation	steady state bioconcentration factor for liver, calculated on a wet weight basis; range for 7 doses	49 - 163	mr	81
DIELDRIN	0, 0.014, 0.019, 0.052, 0.075, 0.118, 0.177, 0.193 mg/L	TOX-EXP IND - accumulation	steady state bioconcentration factor for muscle, calculated on a wet weight basis; range for 7 doses	5.5 - 95	ms	81
DIELDRIN	0, 0.014, 0.052, 0.118 mg/L	TOX-MORT - dose-response data	no mortality observed	no effect	mt	81
DIELDRIN	0, 0.3, 16, 48, 155, 272, 606 ug/g diet	TOX-MORT - toxicity benchmarks	24-d LC50	29.5 ug/g diet (14 - 28 ug/g, 95% CI)	mu	81
DIELDRIN	0, 75, 93, 116, 145, 180, 225 ppm diet	TOX-MORT - toxicity benchmarks	5 day dietary LC50	155.8 (coeff. of variation = 16.0%)	mv	78
DIELDRIN	0, 100, 132, 173, 228, 300 ppm diet	TOX-MORT - toxicity benchmarks	5 day dietary LC50	200.7 (coeff. of variation 22.3%)	mw	78
DIELDRIN	0, 0.3, 16, 48, 155, 272, 606 ug/g diet	TOX-MORT - toxicity benchmarks	96 hr LC50	165 ug/g diet (100 - 224 ug/g, 95% CI)	mx	81
DIELDRIN	0, 4, 10, and 30 ppm Dieldrin	TOX-Non-Repro-Sublethal - behavioral effects	% drake encounter scores	decreased @ all doses	my	80
DIELDRIN	0, 1, 5, 10 mg/kg diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic microsomal enzyme activity (aniline hydroxylase and aminopyrine N-demethylase)	no effect	mz	69
DIELDRIN	0, 4, 10, and 30 ppm Dieldrin	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic microsomal enzyme activity versus controls	increased@ 4, 10, 30 ppm	na	80
DIELDRIN	0, 4, 10, and 30 ppm Dieldrin	TOX-Non-Repro-Sublethal - cellular/biochemical effects	liver DNA content versus controls	increased @ 10, 30 ppm	nb	80
DIELDRIN	0, 4, 10, and 30 ppm Dieldrin	TOX-Non-Repro-Sublethal - cellular/biochemical effects	liver protein concentration versus controls	increased @ 30 ppm	nc	80
DIELDRIN	0, 4, 10, and 30 ppm Dieldrin	TOX-Non-Repro-Sublethal - cellular/biochemical effects	Serotonin, norepinephrine, and dopamine levels versus controls	decreased @ 10 ppm (serotonin only) and 30 ppm	nd	80
DIELDRIN	0, 4, 10, and 30 ppm Dieldrin	TOX-Non-Repro-Sublethal - organ/system effects	brain and liver weight to body weight ratios versus controls	increased @ 10 ppm (liver only), 30 ppm (brain only)	ne	80
DIELDRIN	0, 4, 10, and 30 ppm Dieldrin	TOX-Non-Repro-Sublethal - organ/system effects	bw versus controls	no effect	nf	80
DIELDRIN	0, 0.3, 16, 48, 155, 272, 606 ug/g diet	TOX-Non-Repro-Sublethal - whole animal	24-d LOAEL based on growth impairment	16.4 ug/g diet	ng	81
DIELDRIN	0, 0.3, 16, 48, 155, 272, 606 ug/g diet	TOX-Non-Repro-Sublethal - whole animal	24-d NOAEL based on growth impairment	0.3 ug/g	nh	81
DIELDRIN	0, 10, 20 ug/g diet	TOX-Non-Repro-Sublethal - whole animal	body or liver weight at end of experiment	no effect	ni	70
DIELDRIN	0, 0.014, 0.052, 0.118 mg/L	TOX-Non-Repro-Sublethal - whole animal	body weight at end of experiment	no effect	nj	81
DIELDRIN	control, 4 ppm	TOX-REPRO - development	progeny growth (average body weights) at hatch to 6 wks of age	no effect	nk	83

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
DIELDRIN	<0.2, 2.6, 26.2, 49.3 ug/g diet	TOX-REPRO - development	total body weight, compared to control	no effect	nl	82
DIELDRIN	control, 4 ppm	TOX-REPRO - physiology	egg production, eggshell thickness and fertility, compared to control	no effect	nm	83
DIELDRIN	0, 1, 5, 10 mg/kg	TOX-REPRO - physiology	eggshell thickness	6% decrease @ 10 ppm	nn	72
DIELDRIN	0, 10, 20 ug/g diet	TOX-REPRO - physiology	estradiol metabolism and cytochrome P450 concentration	increase @ 10-20 ug/g	no	70
DIELDRIN	control, 4 ppm	TOX-REPRO - reproductive success	average % hatchability, compared to controls	decrease	np	83
DIELDRIN	0, 1, 5, 10 mg/kg diet	TOX-REPRO - reproductive success	fertility, hatchability and duckling weight	no effect	nq	69
DIISOPROPYL METHYLPHOSPHONATE	1500 mg/kg	TOX-Non-Repro-Sublethal - whole animal	mean blood pressure, compared to baseline prior to exposure	decrease	nr	84
EMAMECTIN BENZOATE	0, 4, 8, 20, 40 ppm in diet	TOX-MORT - dose-response data	mortality versus controls	no effect	ns	85
EMAMECTIN BENZOATE	0, 25, 50, 100, 200, 400, 800 mg/kg bw; avg measured concentration was 107% of nominal	TOX-MORT - toxicity benchmarks	acute oral LD50	76 mg/kg bw, 56-102 (95% CI)	nt	86
EMAMECTIN BENZOATE	0, 10, 20, 40, 80, 163, 327, 654, 1308 mg/kg bw; avg measured concentration was 108% of nominal	TOX-MORT - toxicity benchmarks	dietary LC50	570 ppm diet, 391-915 (95% CI)	nu	86
EMAMECTIN BENZOATE	0, 4, 8, 20, 40 ppm in diet	TOX-Non-Repro-Sublethal - behavioral effects	feed consumption versus controls	no effect	nv	85
EMAMECTIN BENZOATE	0, 4, 8, 20, 40 ppm in diet	TOX-Non-Repro-Sublethal - organ/system effects	microscopic changes to brain, spinal cord, or peripheral nerves versus controls	no effect	nw	85
EMAMECTIN BENZOATE	0, 4, 8, 20, 40 ppm in diet	TOX-Non-Repro-Sublethal - whole animal	incidence of signs of toxicity and body weight versus controls	no effect	nx	85
EMAMECTIN BENZOATE	0, 10, 20, 40, 80, 163, 327, 654, 1308 mg/kg bw; avg measured concentration was 108% of nominal	TOX-Non-Repro-Sublethal - whole animal	no-observed-effect concentration (NOEC), based on reduced feed consumption and weight gain	20 ppm diet	ny	86
EMAMECTIN BENZOATE	0, 25, 50, 100, 200, 400, 800 mg/kg bw; avg measured concentration was 107% of nominal	TOX-Non-Repro-Sublethal - whole animal	no-observed-effect level, based on body weight loss	< 25 mg/kg bw	nz	86
EMAMECTIN BENZOATE	0, 4, 8, 20, 40 ppm in diet	TOX-REPRO - reproductive success	numbers of eggs laid and hatched, eggshell thickness, and 14-day hatchling survival versus controls	no effect	oa	85
ENDOSULFAN	NR	TOX-MORT - toxicity benchmarks	LD50	27.8 mg/kg	ob	5
ENDOSULFAN	NR	TOX-MORT - toxicity benchmarks	LD50	6.47 mg/kg	oc	5
ENDOSULFAN	NR	TOX-MORT - toxicity benchmarks	LD50	7.89 mg/kg	od	5
ENDOSULFAN	NR	TOX-MORT - toxicity benchmarks	LD50	34.4 mg/kg	oe	5
ENDRIN	0, 20 mg/kg diet	TOX-EXP IND - accumulation	figures of carcass and blood endrin concentrations during elimination period (0-64d)	see citation	of	87
ENDRIN	1.3-1.7 kg/ha	TOX-EXP IND - accumulation	tissue endrin residues	breast muscle=non-detect.; liver=non-detect.-0.05; fat=non-detect.-0.50 ppm, wet wt	og	88

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
ENDRIN	NR	TOX-MORT - toxicity benchmarks	LD50's determined at ages 36 hr, 7 d, 30 d, and 6 mos, respectively (95% CI in parenth.)	22.3 (9.88-50.3), 3.37 (2.36-4.80), 2.90 (2.17-3.88), 5.33 (3.67-7.73)	oh	5
EPN	0,12,36,108 ug/g egg	TOX-MORT - dose-response data	% surviving to hatch versus controls	decreased @ 12 ug/g (48%), 36 ug/g (29%), 108 ug/g (0%)	oi	89
EPN	0,12,36,108 ug/g egg	TOX-MORT - dose-response data	percent survival versus controls	decreased @ 12 ug/g (82%); 36 ug/g (77%); 108 ug/g (70%)	oj	89
EPN	0, 10, 30, 90, 270 ppm diet	TOX-Non-Repro-Sublethal - behavioral effects	food consumption and body weight compared with controls	decreased @ 90, 270 ppm	ok	90
EPN	0, 10, 30, 90, 270 ppm diet	TOX-Non-Repro-Sublethal - behavioral effects	incidence of hyperactivity, ataxia, and/or paralysis compared with controls	increased @ all doses	ol	90
EPN	0, 10, 30, 90, 270 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	activity of brain and plasma cholinesterase, and brain neurotoxic esterase compared with controls	decreased @ all doses	om	90
EPN	0,12,36,108 ug/g egg	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain protein content versus controls	decreased @ 108 ug/g	on	89
EPN	0,12,36,108 ug/g egg	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain weight, acetylcholinesterase activity, neurotoxic esterase activity versus controls	decreased @ 12, 36, 108 ug/g	oo	89
EPN	0,12,36,108 ug/g egg	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain weight, protein content, acetylcholinesterase and neurotoxic esterase versus controls	decreased @ 12, 36 ug/g	op	89
EPN	0, 10, 30, 90, 270 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma alkaline phosphatase activity compared with controls	decreased @ 90, 270 pmm	oq	90
EPN	0,12,36,108 ug/g egg	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma alkaline phosphatase, aspartate aminotransferase, cholinesterase activities, and uric acid	decreased @ 36 (cholineserase only), 108 ug/g	or	89
EPN	0,12,36,108 ug/g egg	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma cholinesterase activity, hemoglobin and uric acid content	decreased @ 12, 36 ug/g	os	89
EPN	0, 10, 30, 90, 270 ppm diet	TOX-Non-Repro-Sublethal - organ/system effects	incidence of CNS lesions (demyelination, axonal degeneration in spinal cord) compared with controls	increased @ 30, 90, 270 ppm	ot	90
EPN	0,12,36,108 ug/g egg	TOX-REPRO - development	embryo weight and length, % normal survivors versus controls	decreased @ 12, 36, 108 ug/g	ou	89
FENSULFOTHION	NR	TOX-MORT - toxicity benchmarks	LD50's determined at ages 36 hr, 7 d, 30 d, and 6 mos, respectively (95% CI in parenth.)	0.528, 0.747, 1.06 (0.868-1.29), 0.747 (0.588-0.949)	ov	5
FENSULFOTHION	0, 0.75 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain cholinesterase inhibition compared with controls	48.9% (7.6 SE)	ow	2
FENTHION	0, 5 mg/L in water of dietary tadpoles (96 hours)	TOX-MORT - dose-response data	percent mortality	100% @ 5 mg/L	ox	3
FENTHION	logarithmically spaced does up to 1 mg/L in water of dietary tadpoles (96 hours)	TOX-MORT - dose-response data	percent mortality	67% @ 2.2 mg/L	oy	3
FENTHION	0, 5 mg/L in water of dietary tadpoles (96 hours)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain acetylcholinesterase activity compared with controls	16.9% @ 5mg/L	oz	3
FENTHION	0, 5.5 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	maximal brain acetylcholinesterase activity inhibition compared to control (4 hrs post-dose)	61%	pa	79
FONOFOS	0, 14 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain cholinesterase inhibition compared with controls	67.1% (4.9 SE)	pb	2

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
FUEL OILS	control, 1.0, 2.5, 4.0, 7.0, 12.0 ml/kg Bunker C fuel oil, daily	TOX-Non-Repro-Sublethal - organ/system effects	mean spleen index (spleen wt./body wt.)	decrease @ 4.0, 7.0, 12.0 ml/kg/d	pc	38
FUEL OILS	control, 2.5, 4.0 ml/kg Bunker C fuel oil, daily	TOX-Non-Repro-Sublethal - organ/system effects	susceptibility to Pasturella multocida estimated as % mortality 2-wks post-exposure to Pasturella multocida which was given on day 28	increase @ 2.5, 4.0 ml/kg	pd	38
FUEL OILS	control, 1.0, 2.5, 4.0, 7.0, 12.0 ml/kg Bunker C fuel oil, daily	TOX-Non-Repro-Sublethal - whole animal	body weight and gross lesion incidence, compared to controls	no effect	pe	38
FUEL OILS	control, 5, 10, 20, 50 ul Bunker C fuel oil, applied externally to the air cell of viable eggs	TOX-REPRO - development	6-day % survival of mallard embryos from eggs treated on the 8th day of incubation	decrease @ 5, 10, 20, 50 ul	pf	91
FUEL OILS	0, 0.2%, 2% aqueous spray oil emulsion	TOX-REPRO - development	embryo survival through day 18 of incubation versus controls	decreased @ 2% emulsion, incubation day 8 exposure	pg	4
FUEL OILS	0, 0.5, 5 ul RDCO oil/egg	TOX-REPRO - development	embryo survival to day 18 of incubation and % of survivors that were normal versus controls	decreased @ 0.5, 5 ul/egg on incubation day 3 or 8	ph	4
FUEL OILS	0, 0.5, 5 ul RDCO oil/egg	TOX-REPRO - development	embyronic length and weight by incubation day 18 versus controls	decreased @ 0.5 ul/egg, incubation day 3 or 8 exposure	pi	4
FUEL OILS	control, 5, 10, 20, 50 ul Bunker C fuel oil, applied externally to the air cell of viable eggs	TOX-REPRO - reproductive success	30-d % hatching success	decrease @ 5, 10, 20, 50 ul	pj	91
GLYPHOSATE	0, 50, 70, or 90 percent of wetland sprayed	TOX-Non-Repro-Sublethal - indirect effects	population density 2 years post-spray versus controls	increased @ 50, 90 percent	pk	92
HEPTACHLOR	0, 1000 mg/kg bw	TOX-REPRO - physiology	post-dose eggshell thickness versus pre-dose thickness	decreased @ 1000 mg/kg bw	pl	15
IRON (elemental); LEAD (elemental)	0, 8, 16, 32, 64 #four iron shot	TOX-Non-Repro-Sublethal - cellular/biochemical effects	serum enzyme levels versus controls (at 30 or 60 d post dose)	no effect	pm	93
IRON (elemental); LEAD (elemental)	0, 4 or 8 #four iron shot, 8 #six lead shot	TOX-Non-Repro-Sublethal - cellular/biochemical effects	serum glutamic pyruvic transaminase activity vs controls	increased @ 8 #four iron shot	pn	93
IRON (elemental); LEAD (elemental)	0, 4 or 8 #four iron shot, 8 #six lead shot	TOX-Non-Repro-Sublethal - organ/system effects	incidence of hemosiderosis in liver vs controls	increased with all treatments	po	93
IRON (elemental); LEAD (elemental)	0, 4 or 8 #four iron shot, 8 #six lead shot	TOX-Non-Repro-Sublethal - organ/system effects	incidence of inclusion bodies in kidney vs controls	increased @ 8 #four iron shot	pp	93
LEAD (elemental)	1 lead shot (no. 4)	TOX-EXP IND - accumulation	blood Pb concentrations versus pre-dose controls	increased	pq	94
LEAD (elemental)	0, 1 #four shot plus SRBC immune challenge at 0, 7, 14, 21 d post-dose	TOX-EXP IND - accumulation	concentration of lead in blood versus controls	increased @ 7, 14, 21 d post-dose	pr	95
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-EXP IND - accumulation	lead concentration in bone (mean +/- SE)	lead only: 112.27 (+/- 44.27); lead-iron: 32.65 (+/- 16.58) ppm, wet wt	ps	96
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-EXP IND - accumulation	lead concentration in bone (mean +/- SE)	lead only: 10.22 (+/- 1.46); lead-iron: 3.38 (+/- 0.56) ppm, wet wt	pt	96
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-EXP IND - accumulation	lead concentration in blood (mean +/- SE)	lead only: 0.71 (+/- 0.25); lead-iron: 0.31 (+/- 0.06) ppm, wet wt	pu	96

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-EXP IND - accumulation	lead concentration in blood (mean +/- SE)	lead only: 0.49 (+/-0.10); lead-iron: 0.23 (+/- 0.04) ppm, wet wt	pv	96
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-EXP IND - accumulation	lead concentration in kidneys (mean +/- SE)	lead only: 3.53 (+/- 1.43); lead-iron: 1.42 (+/- 0.65) ppm, wet wt	pw	96
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-EXP IND - accumulation	lead concentration in kidneys (mean +/- SE)	lead only: 1.02 (+/- 0.22); lead-iron: 0.75 (+/- 0.10) ppm, wet wt	px	96
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-EXP IND - accumulation	lead concentration in liver (mean +/- SE)	lead only: 1.15 (+/- 0.29); lead-iron: 0.32 (+/- 0.05) ppm, wet wt	py	96
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-EXP IND - accumulation	lead concentration in liver (mean +/- SE)	lead only: 0.58 (+/- 0.19); lead-iron: 0.25 (+/- 0.02) ppm, wet wt	pz	96
LEAD (elemental)	control, 300 mg/kg body weight; elemental lead packaged in gelatin capsules	TOX-EXP IND - accumulation	lead concentrations in tissues, 96 hr after exposure to lead in ducklings receiving vitamin E	5.7 ppm (whole blood); 6.2 ppm (liver); 2.4 ppm (spleen) @ 300 mg/kg body weight	qa	97
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-EXP IND - accumulation	lead in egg contents and shell (mean +/- SE) versus controls	increased with lead shot (egg contents: 0.50 +/-0.06; egg shell: 2.80 +/-0.25 ppm, wet wt) and lead-iron shot (egg shell: 1.42 +/-0.26 ppm, wet wt)	qb	96
LEAD (elemental)	15750 (TF enclosure) , 173200 (T19 enclosure), or 2299700 (P8 enclosure) lead pellets/ha	TOX-EXP IND - accumulation	maximum likelihood estimate of 2-week Pb exposure rate	higher in P8 than in T19 and TF, and in T19 than in TF	qc	98
LEAD (elemental)	2 # four shot	TOX-EXP IND - accumulation	mean (2SE) lead concentration in liver, femur and blood	ppm wet wt: 3.47 (1.38), blood; 32.16 (11.60), liver; 114.78 (28.96), femur @ 2 #four shot	qd	99
LEAD (elemental)	2 # four shot	TOX-EXP IND - accumulation	mean (2SE) lead concentrations in liver, femur and blood	ppm wet wt: 4.15 (3.56), blood; 13.85 (7.96), liver; 577.07 (156.4), femur@ 2 #four shot	qe	99
LEAD (elemental)	931,000 shot/acre (field exposure)	TOX-EXP IND - accumulation	mean (2SE) lead concentrations in liver, femur and blood	ppm wet wt: 1.40 (0.7), blood; 6.40 (4.92), liver; 38.64 (19.18), femur @ 2 #four shot	qf	99
LEAD (elemental)	931,000 shot/acre (field exposure)	TOX-EXP IND - accumulation	mean (2SE) lead concentrations in liver, femur and blood	ppm wet wt: 1.21 (0.78), blood; 2.32 (1.10), liver; 131.13 (90.94), femur @ 2 #four shot	qg	99
LEAD (elemental)	0, 1, 2 lead shot (206 mg avg wt)	TOX-EXP IND - accumulation	mean (SE) lead residues in femur	one shot: 180.4 (18.1), female; 5.0 (0.6), male two shot: 183.4 (21.2), female; 15.9 (4.1), male	qh	100

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
LEAD (elemental)	0, 2, 5, 5 (w/5 repeated doses) Pb shot (no. 6)	TOX-EXP IND - accumulation	Pb concentrations in wing bone and liver	increased @ all doses	qi	101
LEAD (elemental)	0, 4 #four lead shot; combined with commerical feed, Ca- supplemented corn diet, or corn only diet	TOX-MORT - dose-response data	% mortality versus controls	increased with Pb/corn+Ca (50%), and Pb/corn only (100%)	qj	102
LEAD (elemental)	0, 2, or 4 #four lead shot	TOX-MORT - dose-response data	cumulative mortality	60% @ 2 shot, 30% @ 4 shot	qk	103
LEAD (elemental)	0, 1 #four shot plus SRBC immune challenge at 0, 7, 14, 21 d post-dose	TOX-MORT - dose-response data	mortality rate by 15 d post-dose versus controls	increased @ 1 #four shot	ql	95
LEAD (elemental)	0, 931,000 shot/acre (field exposure) or 2 # four shot (lab exposure)	TOX-MORT - dose-response data	mortality versus controls	increased @ 2 #four shot	qm	99
LEAD (elemental)	0, 2, 5, 5 (w/5 repeated doses) Pb shot (no. 6)	TOX-MORT - dose-response data	percent mortality versus controls	increased @ 5 shot (33%) and repeated 5 shot (40%)	qn	101
LEAD (elemental)	15750 (TF enclosure) , 173200 (T19 enclosure), or 2299700 (P8 enclosure) lead pellets/ha	TOX-MORT - mortality in the field	mortality rate (over 4 years)	higher in P8 than in T19 and TF, and in T19 than in TF	qo	98
LEAD (elemental)	0, 1 #four shot plus SRBC immune challenge at 0, 7, 14, 21 d post-dose	TOX-Non-Repro-Sublethal - cellular/biochemical effects	agglutination titers to sheep red blood cells versus controls	decreased @ 1 #four shot, 7, 14, 21 d. post-dose	qp	95
LEAD (elemental)	0, 1 lead shot (no. 4)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	blood ALAD activity versus controls	decreased (60%)	qq	104
LEAD (elemental)	1 lead shot (no. 4)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	blood ALAD enzyme activity after 1,2, or 3 months versus pre-dose controls	decreased	qr	94
LEAD (elemental)	0, 4 #four lead shot; combined with commerical feed, Ca-supplemented corn diet, or corn only diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	blood protoporphyrin concentrations versus controls	increased with Pb/corn + Ca, Pb/corn only	qs	102
LEAD (elemental)	0, 1 lead shot (no. 4)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	blood protoporphyrin levels versus controls	increased	qt	104
LEAD (elemental)	10-120 ug/dl blood (mean 46 +/- 25 sd)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	delta-aminolevulinic acid dehydratase activity	decreased @ > 60 ug/dl blood	qu	105
LEAD (elemental)	0, 1 #four lead shot	TOX-Non-Repro-Sublethal - cellular/biochemical effects	erythrocyte protoporphyrin concentrations versus controls	increased	qv	103
LEAD (elemental)	0, 4 #four lead shot; combined with commerical feed, Ca-supplemented corn diet, or corn only diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	red blood cell counts, packed cell volume, hemoglobin concentration versus controls	decreased in Pb/commerical (hemoglobin only), Pb/corn+Ca, and Pb/corn only	qw	102
LEAD (elemental)	0, 1 lead shot (no. 4)	TOX-Non-Repro-Sublethal - organ/system effects	hemoglobin and hematocrit versus controls	decreased	qx	104
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-Non-Repro-Sublethal - organ/system effects	incidence of lead poisoning tissue lesions versus controls	no effect	qy	96
LEAD (elemental)	0, 931,000 shot/acre or 2 # four shot	TOX-Non-Repro-Sublethal - organ/system effects	spleen plaque forming cell counts, % packed cell volume versus controls	decreased @ 2 #four shot	qz	99
LEAD (elemental)	0, 931,000 shot/acre (field exposure) or 2 # four shot (lab exposure)	TOX-Non-Repro-Sublethal - organ/system effects	spleen weight and total white blood cell counts versus controls	decreased @ 931,000 shot/acre or 2 #four pellets	ra	99
LEAD (elemental)	0, 1 #four lead shot	TOX-Non-Repro-Sublethal - whole animal	body weight and delta-aminolevulinic acid dehydratase activity versus controls	decreased	rb	103

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-Non-Repro-Sublethal - whole animal	body weight and food consumption versus controls	no effect	rc	96
LEAD (elemental)	0, 1 #four lead shot	TOX-Non-Repro-Sublethal - whole animal	body weight and hematocrit versus controls	no effect	rd	103
LEAD (elemental)	0, 1, 2 lead shot (206 mg avg wt)	TOX-Non-Repro-Sublethal - whole animal	body weight compared to controls	no effect	re	100
LEAD (elemental)	0, 1 #four shot plus SRBC immune challenge at 0, 7, 14, 21 d post-dose	TOX-Non-Repro-Sublethal - whole animal	body weight versus controls	no effect	rf	95
LEAD (elemental)	0, 2, 5, 5 (w/5 repeated doses) Pb shot (no. 6)	TOX-Non-Repro-Sublethal - whole animal	bw versus controls	decreased	rg	101
LEAD (elemental)	0, 4 #four lead shot; combined with commerical feed, Ca- supplemented corn diet, or corn only diet	TOX-Non-Repro-Sublethal - whole animal	incidence of clinical signs, weight loss, breast muscle atrophy	increased in all groups dosed with lead shot	rh	102
LEAD (elemental)	0, 1, 2 lead shot (206 mg avg wt)	TOX-REPRO - reproductive success	egg production versus controls	no effect	ri	100
LEAD (elemental)	0, 1 #four lead shot, or 1 #four iron-lead shot (47.5% lead)	TOX-REPRO - reproductive success	number of eggs laid	decreased with increasing lead in bone	rj	96
LEAD (elemental); STEEL COMPOUNDS; TUNGSTEN COMPOUNDS	control, steel (eight #4 pellets), lead (eight #4 pellets), tungsten-iron (eight BB size pellets), tungsten-polymer (eight BB size pellets); See paper for data on shot recovery and erosion in dosed du	TOX-EXP IND - accumulation	mean(SE) dry wt lead concentrations in tissues of lead-dosed birds	250.6(39.0) ppm in femur, 78.3(9.7) ppm in liver, 256.3(22.2) in kidneys	rk	106
LEAD (elemental); STEEL COMPOUNDS; TUNGSTEN COMPOUNDS	control, steel (eight #4 pellets), lead (eight #4 pellets), tungsten-iron (eight BB size pellets), tungsten-polymer (eight BB size pellets); See paper for data on shot recovery and erosion in dosed du	TOX-EXP IND - accumulation	mean(SE) dry wt tungsten concentrations in tissues of tungsten-iron-dosed birds	10.3(0.7) ppm in femur, 14.1(0.6) ppm in liver, 6.8(0.2) in kidneys	rl	106
LEAD (elemental); STEEL COMPOUNDS; TUNGSTEN COMPOUNDS	control, steel (eight #4 pellets), lead (eight #4 pellets), tungsten-iron (eight BB size pellets), tungsten-polymer (eight BB size pellets); See paper for data on shot recovery and erosion in dosed du	TOX-EXP IND - accumulation	mean(SE) dry wt tungsten concentrations in tissues of tungsten-polymer-dosed birds	4.3(0.7) ppm in femur, non-detect. in liver, 2.4(0.2) in kidneys	rm	106
LEAD (elemental); STEEL COMPOUNDS; TUNGSTEN COMPOUNDS	control, steel (eight #4 pellets), lead (eight #4 pellets), tungsten-iron (eight BB size pellets), tungsten-polymer (eight BB size pellets); See paper for data on shot recovery and erosion in dosed du	TOX-MORT - dose-response data	mortality rate versus all other groups	increased for lead shot	rn	106
LEAD (elemental); STEEL COMPOUNDS; TUNGSTEN COMPOUNDS	control, steel (eight #4 pellets), lead (eight #4 pellets), tungsten-iron (eight BB size pellets), tungsten-polymer (eight BB size pellets); See paper for data on shot recovery and erosion in dosed du	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hematocrit and hemoglobin concentrations versus all other groups	reduced for lead shot	ro	106
LEAD (elemental); STEEL COMPOUNDS; TUNGSTEN COMPOUNDS	control, steel (eight #4 pellets), lead (eight #4 pellets), tungsten-iron (eight BB size pellets), tungsten-polymer (eight BB size pellets); See paper for data on shot recovery and erosion in dosed du	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma activities of alanine aminotransferase, creatine phosphokinase, aspartate aminotransferase, lactate dehydrogenase versus control group	increased for lead shot	rp	106
LEAD (elemental); STEEL COMPOUNDS; TUNGSTEN COMPOUNDS	control, steel (eight #4 pellets), lead (eight #4 pellets), tungsten-iron (eight BB size pellets), tungsten-polymer (eight BB size pellets); See paper for data on shot recovery and erosion in dosed du	TOX-Non-Repro-Sublethal - organ/system effects	iron concentrations in femur and liver versus controls	increased for lead shot, steel and tungsten-iron groups	rq	106

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
LEAD (elemental); STEEL COMPOUNDS; TUNGSTEN COMPOUNDS	control, steel (eight #4 pellets), lead (eight #4 pellets), tungsten-iron (eight BB size pellets), tungsten-polymer (eight BB size pellets); See paper for data on shot recovery and erosion in dosed du	TOX-Non-Repro-Sublethal - organ/system effects	relative kidney weights versus controls	increased for lead shot	rr	106
LEAD (elemental); STEEL COMPOUNDS; TUNGSTEN COMPOUNDS	control, steel (eight #4 pellets), lead (eight #4 pellets), tungsten-iron (eight BB size pellets), tungsten-polymer (eight BB size pellets); See paper for data on shot recovery and erosion in dosed du	TOX-Non-Repro-Sublethal - organ/system effects	renal concentrations of iron versus controls	increased for lead, steel shot	rs	106
LEAD (elemental); STEEL COMPOUNDS; TUNGSTEN COMPOUNDS	control, steel (eight #4 pellets), lead (eight #4 pellets), tungsten-iron (eight BB size pellets), tungsten-polymer (eight BB size pellets); See paper for data on shot recovery and erosion in dosed du	TOX-Non-Repro-Sublethal - whole animal	body weight versus all other groups	reduced for lead shot	rt	106
LEAD (elemental); STEEL COMPOUNDS; TUNGSTEN COMPOUNDS	control, steel (eight #4 pellets), lead (eight #4 pellets), tungsten-iron (eight BB size pellets), tungsten-polymer (eight BB size pellets); See paper for data on shot recovery and erosion in dosed du	TOX-Non-Repro-Sublethal - whole animal	incidence of clinical signs versus other groups	increased for lead shot	ru	106
LEAD ACETATE	20 ppm x 1.6(week, after 1st week)	TOX-EXP IND - accumulation	liver and kidney Pb concentrations versus controls	increased	rv	107
LEAD ACETATE	20 ppm x 1.6(week, after 1st week)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	ALAD enzyme activity versus controls	decreased	rw	107
LEAD ACETATE	20 ppm x 1.6(week, after 1st week)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	iron concentration in liver versus controls	increased	rx	107
LEAD ACETATE	20 ppm x 1.6(week, after 1st week)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	protoporphyrin concentration versus controls	increased	ry	107
LEAD ACETATE	20 ppm x 1.6(week, after 1st week)	TOX-Non-Repro-Sublethal - organ/system effects	% packed cell volume versus controls	decreased	rz	107
LEAD ACETATE	20 ppm x 1.6(week, after 1st week)	TOX-Non-Repro-Sublethal - organ/system effects	hemoglobin concentration versus controls	decreased	sa	107
LEAD COMPOUNDS	297,590 shot pellets/ha (in sediment)	TOX-EXP IND - accumulation	geometric mean concentration in kidneys (range)	1.367 (<0.05-29.80)	sb	108
LEAD COMPOUNDS	297,590 shot pellets/ha (in sediment)	TOX-EXP IND - accumulation	geometric mean concentrations (ranges) in humerus, spleen, pancreas, and brain	humerus, 41.652 (8.20-211.6); spleen, 0.669 (0.128-2.397); pancreas, 3.295 (1.074-13.47); brain, 1.367 (0.120-117.1)	sc	108
LEAD COMPOUNDS	297,590 shot pellets/ha (in sediment)	TOX-EXP IND - accumulation	geometric mean liver concentration (range)	0.822 (0.059-21.60) ppm wet wt	sd	108
LEAD COMPOUNDS	100 ppm lead, or 40 ppm DDE + 100 ppm lead	TOX-EXP IND - accumulation	lead residues in whole carcass, egg contents, eggshells, and bone	3.7 (carcass); 2.5 (egg); 2.5 (eggshells); 9.6 (bone) ppm, wet wt @ 100 ppm lead; 3.4 (carcass); 0.88 (egg); 2.8 (eggshells); 35.0 (bone) ppm, wet wt @ 100 ppm lead + DDE	se	57
LEAD COMPOUNDS	0, 8.7 (sediment control), 642, 1284 ug/g diet, added as contaminated sediment	TOX-EXP IND - accumulation	mean (SE) wet wt Pb concentrations in blood	3.0(0.30) ppm @ 642 ug/g Pb; 6.8(0.84) ppm @ 1284 ug/g Pb	sf	109
LEAD COMPOUNDS	0, 8.7 (sediment control), 642, 1284 ug/g diet, added as contaminated sediment	TOX-EXP IND - accumulation	mean (SE) wet wt Pb concentrations in liver	9.1(0.61) ppm @ 642 ug/g Pb; 16(1.5) ppm @ 1284 ug/g Pb	sg	109

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
LEAD COMPOUNDS	0, 3.0 (sediment control, complete diet), 3.7 (sediment control, corn diet), 954 (complete diet), 869 (corn diet) ug/g diet, added as contaminated sediment	TOX-EXP IND - accumulation	mean (SE) wet wt Pb concentrations in blood and liver	4.1(1.03) ppm in blood, 13(1.2) ppm in liver @ 954 ug/g, complete diet; 4.0(0.58) ppm in blood, 38(6.5) ppm in liver @ 869 ug/g, corn diet	sh	109
LEAD COMPOUNDS	0, 1.5 (sediment control), 103, 207, 414, 828 ug/g calculated diet concentrations, added as contaminated sediment	TOX-EXP IND - accumulation	mean(SE) wet wt concentrations of lead in liver	4.6(0.66) ppm @ 103 ug/g Pb; 9.3(0.82) ppm @ 207 ug/g Pb; 12(1.3) ppm @ 414 ug/g Pb; 28(4.6) ppm @ 828 ug/g Pb	si	109
LEAD COMPOUNDS	0-5,000 mg/kg in sediments	TOX-EXP IND - accumulation	relation between waterfowl fecal lead concentration (dry wt) and sediment lead concentration (dry wt)	Equation: fecal Pb conc./fecal acid insoluble ash content = 61 + (1.06 x sediment Pb conc.)	sj	110
LEAD COMPOUNDS	0, 3.0 (sediment control, complete diet), 3.7 (sediment control, corn diet), 954 (complete diet), 869 (corn diet) ug/g diet, added as contaminated sediment	TOX-MORT - dose-response data	mortality versus corn diet controls	increased @ 869 ug/g, corn diet	sk	109
LEAD COMPOUNDS	0, 1.5 (sediment control), 103, 207, 414, 828 ug/g calculated diet concentrations, added as contaminated sediment	TOX-Non-Repro-Sublethal - cellular/biochemical effects	delta aminolevulinic acid dehydratase activity versus controls	reduced @ all doses	sl	109
LEAD COMPOUNDS	0, 8.7 (sediment control), 642, 1284 ug/g diet, added as contaminated sediment	TOX-Non-Repro-Sublethal - cellular/biochemical effects	delta aminolevulinic acid dehydratase activity and hemoglobin concentrations	reduced @ 624 and 1284 ug/g	sm	109
LEAD COMPOUNDS	0, 3.0 (sediment control, complete diet), 3.7 (sediment control, corn diet), 954 (complete diet), 869 (corn diet) ug/g diet, added as contaminated sediment	TOX-Non-Repro-Sublethal - cellular/biochemical effects	delta aminolevulinic acid dehydratase activity versus corn or complete diet controls	reduced @ 869 and 954 ug/g	sn	109
LEAD COMPOUNDS	0, 8.7 (sediment control), 642, 1284 ug/g diet, added as contaminated sediment	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hematocrit versus controls	reduced @ 1284 ug/g	so	109
LEAD COMPOUNDS	0, 1.5 (sediment control), 103, 207, 414, 828 ug/g calculated diet concentrations, added as contaminated sediment	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hemoglobin concentrations versus controls	reduced @ 828 ug/g	sp	109
LEAD COMPOUNDS	0, 3.0 (sediment control, complete diet), 3.7 (sediment control, corn diet), 954 (complete diet), 869 (corn diet) ug/g diet, added as contaminated sediment	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hemoglobin concentration versus corn diet controls	reduced @ 869 ug/g, corn diet	sq	109
LEAD COMPOUNDS	0, 1.5 (sediment control), 103, 207, 414, 828 ug/g calculated diet concentrations, added as contaminated sediment	TOX-Non-Repro-Sublethal - cellular/biochemical effects	occurrence of intranuclear inclusion bodies in kidneys versus controls	increased @ 414, 828 ug/g	sr	109
LEAD COMPOUNDS	0, 1.5 (sediment control), 103, 207, 414, 828 ug/g calculated diet concentrations, added as contaminated sediment	TOX-Non-Repro-Sublethal - cellular/biochemical effects	protoporphyrin levels in blood versus controls	increased @ all doses	ss	109
LEAD COMPOUNDS	0, 8.7 (sediment control), 642, 1284 ug/g diet, added as contaminated sediment	TOX-Non-Repro-Sublethal - cellular/biochemical effects	protoporphyrin versus controls	increased @ 642 and 1284 ug/g	st	109
LEAD COMPOUNDS	0, 3.0 (sediment control, complete diet), 3.7 (sediment control, corn diet), 954 (complete diet), 869 (corn diet) ug/g diet, added as contaminated sediment	TOX-Non-Repro-Sublethal - cellular/biochemical effects	protoporphyrin versus corn or complete diet controls	increased @ 869 and 954 ug/g	su	109
LEAD COMPOUNDS	0, 3.0 (sediment control, complete diet), 3.7 (sediment control, corn diet), 954 (complete diet), 869 (corn diet) ug/g diet, added as contaminated sediment	TOX-Non-Repro-Sublethal - organ/system effects	incidence of renal tubular intranuclear inclusion bodies versus corn or complete diet controls	increased @ 869 and 954 ug/g	sv	109
LEAD COMPOUNDS	0, 8.7 (sediment control), 642, 1284 ug/g diet, added as contaminated sediment	TOX-Non-Repro-Sublethal - organ/system effects	occurrence of renal tubular nuclear inclusion bodies versus controls	increased @ 642 and 1284 ug/g	sw	109

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
LEAD COMPOUNDS	0, 3.0 (sediment control, complete diet), 3.7 (sediment control, corn diet), 954 (complete diet), 869 (corn diet) ug/g diet, added as contaminated sediment	TOX-Non-Repro-Sublethal - whole animal	body weight compared to corn diet controls	reduced @ 869 ug/g, corn diet	sx	109
LEAD COMPOUNDS	0, 1.5 (sediment control), 103, 207, 414, 828 ug/g calculated diet concentrations, added as contaminated sediment	TOX-Non-Repro-Sublethal - whole animal	body weight versus controls	no effect	sy	109
LEAD COMPOUNDS	0, 8.7 (sediment control), 642, 1284 ug/g diet, added as contaminated sediment	TOX-Non-Repro-Sublethal - whole animal	body weight versus controls	no effect	sz	109
LEAD COMPOUNDS	0, 1.5 (sediment control), 103, 207, 414, 828 ug/g calculated diet concentrations, added as contaminated sediment	TOX-Non-Repro-Sublethal - whole animal	occurrence of lead poisoning signs versus controls	increased @ 828 ug/g	ta	109
LEAD NITRATE	0, 1, 5, 25 ppm diet	TOX-EXP IND - accumulation	accumulation in livers and kidneys versus controls	increased @ 25 ppm/3wks	tb	111
LEAD NITRATE	0, 1, 5, 25 ppm diet	TOX-EXP IND - accumulation	lead concentration in blood after 12 weeks exposure (mean +/- SE) versus controls	increased @ 5 ppm diet (66 +/-13 ppm blood) and @ 25 ppm diet (154 +/-28 ppm blood)	tc	111
LEAD NITRATE	0,5,50,500 ppm lead as lead nitrate	TOX-Non-Repro-Sublethal - behavioral effects	open field behavior scores versus controls	no effect (3 or 8 d)	td	112
LEAD NITRATE	0, 1, 5, 25 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	delta-aminolevulinic acid dehydratase activity in blood versus controls	decreased @ 25 ppm/3 wks, 5 ppm/12 wks	te	111
LEAD NITRATE	0, 1, 5, 25 ppm diet	TOX-Non-Repro-Sublethal - whole animal	body weight and food consumption versus controls	no effect	tf	111
LEAD NITRATE	0, 300, 3,000, 30,000 ppm lead in solution	TOX-REPRO - development	embryonic length and weight by incubation day 18 versus controls	decreased @ 3,000, 30,000 ppm, incubation day 3 exposure	tg	4
LEAD NITRATE	0,5,50,500 ppm lead as lead nitrate	TOX-REPRO - development	mean percentage weight gain versus controls	decreased @ 5 ppm (8 d exposure)	th	112
LEPTOPHOS	0, 260 ppm diet	TOX-Non-Repro-Sublethal - behavioral effects	incidence of ataxia	5/5 @ 260 ppm	ti	113
LEPTOPHOS	0, 60, 270, 540 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	activity of brain and plasma cholinesterase, and brain neurotoxic esterase compared with controls	decreased @ all doses	tj	90
LEPTOPHOS	0, 60, 270, 540 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma alkaline phosphatase activity compared with controls	decreased @ 60, 270 ppm	tk	90
LEPTOPHOS	0, 60, 270, 540 ppm diet	TOX-Non-Repro-Sublethal - organ/system effects	brain weight compared with controls	decreased @ 270 ppm	tl	90
LEPTOPHOS	0, 260 ppm diet	TOX-Non-Repro-Sublethal - organ/system effects	incidence of CNS lesions	4/5 @ 260 ppm	tm	113
LEPTOPHOS	0, 60, 270, 540 ppm diet	TOX-Non-Repro-Sublethal - organ/system effects	incidence of CNS lesions (demyelination, axonal degeneration in spinal cord) compared with controls	increased @ all doses	tn	90
LEPTOPHOS	0, 60, 270, 540 ppm diet	TOX-Non-Repro-Sublethal - whole animal	body weight compared with controls	decreased @ 270, 540 ppm	to	90
LEPTOPHOS	0, 260 ppm diet	TOX-Non-Repro-Sublethal - whole animal	body weight growth compared with controls	decreased @ 260 ppm	tp	113
LINDANE	20 mg/kg given 7x, 3x or 2x per wk	TOX-EXP IND - accumulation	mean lindane residue levels	serum (0.13); fat (0.20); muscle (0.70); kidney (0.02); liver (0.02); brain (0.01) ppm @ 20 mg/kg 2x/wk	tq	114

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
LINDANE	20 mg/kg given 7x, 3x or 2x per wk	TOX-EXP IND - accumulation	mean lindane residue levels	serum (0.20); fat (0.68); muscle (0.30); kidney (0.23); liver (0.14); brain (0.11) ppm @ 20 mg/kg 3x/wk	tr	114
LINDANE	20 mg/kg given 7x, 3x or 2x per wk	TOX-EXP IND - accumulation	mean lindane residue levels	serum (0.50); fat (1.14); muscle (0.82); kidney (0.28); liver (0.21); brain (0.13) ppm @ 20 mg/kg 7x/wk	ts	114
LINDANE	3-6 doses (lbs/acre) @ 100 gal emulsifiable concn./acre	TOX-MORT - toxicity benchmarks	LC50	62 lbs AI/acre (slope = 8.13) for exposure of 3d embryo; 52 lbs AI/acre (slope = 9.19) for exposure of 8d embryo	tt	115
LINDANE	3-6 doses (lbs/acre) @ 11 gal oil base carrier/acre	TOX-MORT - toxicity benchmarks	LC50	8.5 lbs AI/acre (slope = 1.34) for exposure of 3d embryo; 7.3 lbs AI/acre (slope = 2.72) for exposure of 8d embryo	tu	115
LINDANE	control, 20 mg/kg given 7x, 3x or 2x/wk	TOX-Non-Repro-Sublethal - whole animal	body weight at end of study	no effect	tv	116
LINDANE	control, 20 mg/kg given 7x, 3x or 2x/wk	TOX-REPRO - physiology	calcium concentration in plasma and shell gland mucosa and density and size of eggshell pores	decrease @ 20 mg/kg 7x or 3x/wk	tw	117
LINDANE	control, 20 mg/kg given 7x, 3x or 2x/wk	TOX-REPRO - physiology	egg production and vitellogenin concentration in plasma, liver and ovary	decrease @ 20 mg/kg 7x and 3x/wk	tx	116
LINDANE	control, 20 mg/kg given 7x, 3x or 2x/wk	TOX-REPRO - physiology	eggshell thickness, compared to control	18-21% decrease @ 20 mg/kg 7x or 3x/wk	ty	117
MALATHION	12.5, 125 lb/acre simulated, aqueous; 0, 1.4, 14.0 lb/acre simulated, oil	TOX-MORT - dose-response data	cumulative mortality by day 18 compared with controls	increased @ 125 lb/acre	tz	77
MALATHION	0, 650 mg/kg bw	TOX-MORT - dose-response data	mortality incidence by 20 hrs post-dose	7/36	ua	2
MALATHION	0, 5 mg/L in water of dietary tadpoles (96 hours)	TOX-MORT - dose-response data	percent mortality	0% @ 5 mg/L	ub	3
MALATHION	12.5, 125 lb/acre simulated, aqueous	TOX-MORT - toxicity benchmarks	LC50, exposed on day 3 or 8 of incubation	118 (day 3), 101 (day 8) lb/acre	uc	77
MALATHION	0, 1.4, 14.0 lb/acre simulated, oil	TOX-MORT - toxicity benchmarks	LC50, exposed on day 3 or 8 of incubation	49.5 lb/acre	ud	77
MALATHION	0, 5 mg/L in water of dietary tadpoles (96 hours)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain acetylcholinesterase activity compared with controls	90.6% @ 5 mg/L	ue	3
MALATHION	0, 650 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain cholinesterase inhibition compared with controls	67% (11.6 SE)	uf	2
MALATHION	12.5, 125 lb/acre simulated, aqueous	TOX-REPRO - development	crown-rump length at day 18 of incubation compared with controls	decreased @ 125 lb/acre	ug	77
MALATHION	0, 12.5, 125 lb/acre simulated, aqueous; 0, 1.4, 14.0 lb/acre simulated, oil	TOX-REPRO - development	embryo weight by day 18 of incubation compared with controls	decreased @ 125 (aqueous), 14.0 (oil) lb/acre	uh	77
MERCURY COMPOUNDS	200 ppm N-(ethylmercury)-p-toluene sulfoanilide	TOX-EXP IND - accumulation	mercury residues in whole carcass, egg contents, and kidneys	2.5 (carcass); 1.25 (egg); 23.7 (kidney) ppm, wet wt	ui	57
METHYLMERCURY CHLORIDE	0,0.3,1,3,9,27,90 ug Hg	TOX-REPRO - development	% abnormal survivors by day 18 of incubation versus controls	increased @ 1,3,9,27,90 ug Hg	uj	118
METHYLMERCURY CHLORIDE	0,0.3,1,3,9,27,90 ug Hg	TOX-REPRO - development	embryo crown to rump length by day 18 of incubation versus controls	decreased @ 27, 90 ug Hg	uk	118

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
METHYLMERCURY CHLORIDE	0, 50, 500, 5,000 ppm mercury in solution	TOX-REPRO - development	embryo length or weight by incubation day 18 versus controls	decreased @ all doses	ul	4
METHYLMERCURY CHLORIDE	0, 50, 500, 5,000 ppm mercury in solution	TOX-REPRO - development	embryo survival through day 18 of incubation and % of survivors that were normal versus controls	decreased @ 5,000 ppm, incub. day 3 exposure	um	4
METHYLMERCURY CHLORIDE	0,0.3,1,3,9,27,90 ug Hg	TOX-REPRO - reproductive success	% survival by day 18 of incubation versus controls	decreased @ 9, 27, 90 ug Hg	un	118
METHYLMERCURY CHLORIDE	8 mg Hg	TOX-REPRO - reproductive success	hatchability versus controls	decreased	uo	119
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-EXP IND - accumulation	mean (SE) wet wt Hg concentrations in brain	17.9(1.06) ppm @ 10 ppm Hg; 14.1(0.74) ppm @ 10 ppm Hg + 10 ppm Se	up	120
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-EXP IND - accumulation	mean (SE) wet wt Se concentrations in brain	3.4(0.22) ppm @ 10 ppm Se; 5.2(0.44) ppm @ 10 ppm Hg + 10 ppm Se	uq	120
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-EXP IND - accumulation	mean(SE) wet wt concentration of Se in egg and liver of treated birds	7.6(0.26) ppm, egg, 6.0(0.31) ppm, fem. liver, 9.6(0.95) ppm, male liver @ 10 ppm Se; 9.3(0.85) ppm, egg, 9.2(1.61) ppm, female liver, 114(25.3) ppm, male liver @ 10 ppm Se + 10 ppm Hg	ur	121
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-EXP IND - accumulation	mean(SE) wet wt concentration of Hg in egg and liver of treated birds	16(0.8) ppm, egg, 22(1.5) ppm, fem. liver, 71(8.9) ppm, male liver @ 10 ppm Hg; 17(0.6) ppm, egg, 21(4.3) ppm, female liver, 65(4.1) ppm, male liver @ 10 ppm Se + 10 ppm Hg	us	121
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	glutathione peroxidase activity (plasma and liver) and glucose-6-phosphate dehydrogenase (liver and brain) versus controls	decreased @ 10 ppm Hg	ut	120
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hematocrit and hemoglobin values versus controls	reduced @ 10 ppm Se, 10 ppm Se + 10 ppm Hg	uu	120
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic GSSG reductase activity versus controls	increased @ 10 ppm Se	uv	120
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	oxidized glutathione (GSSG) level versus controls	increased @ 10 ppm Hg	uw	120
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma glucose concentrations versus controls	increased @ 10 ppm Hg + 10 ppm Se	ux	120
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma phosphorus concentrations versus controls	decreased @ 10 ppm Se, 10 ppm Hg, 10 ppm Hg + 10 ppm Se	uy	120
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	protein-bound sulfhydryl in liver versus controls	reduced @ 10 ppm Hg, 10 ppm Hg + 10 ppm Se	uz	120
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	thiobarbituric acid-reactive substances in brain versus controls	increased @ 10 ppm Hg, 10 ppm Se, 10 ppm Hg + 10 ppm Se	va	120
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-Non-Repro-Sublethal - whole animal	body weight versus controls	no effect	vb	121

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-Non-Repro-Sublethal - whole animal	incidence of leg weakness versus controls	increased @ 10 ppm Hg	vc	121
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-REPRO - development	incidence of deformities in embryos that died (1 wk or older) versus controls	increased @ 10 ppm Se, 10 ppm Hg, 10 ppm Hg + 10 ppm Se	vd	121
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-REPRO - development	weight of 7 day old ducklings versus controls	reduced @ 10 ppm Se, 10 ppm Hg + 10 ppm Se	ve	121
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-REPRO - reproductive success	egg laying interval, egg weight, egg shell thickness, fertility, duckling survival, hatchling body weights versus controls	no effect	vf	121
METHYLMERCURY CHLORIDE; SELENOMETHIONINE	0, 10 ppm Hg, 10 ppm Se, 10 ppm Hg plus 10 ppm Se in diet	TOX-REPRO - reproductive success	hatchability versus controls	decreased @ 10 ppm Hg, 10 ppm Hg + 10 ppm Se	vg	121
METHYLMERCURY DICYANDIAMIDE	8 ppm diet	TOX-EXP IND - accumulation	figure and table showing decline of Hg in carcass, liver, and kidney over time	see figure and table	vh	122
METHYLMERCURY DICYANDIAMIDE	0.5 ppm Hg in diet	TOX-EXP IND - accumulation	mean concentration of Hg in tissues (ranges are for 3 generations)	ppm, wet wt: 0.79-0.86 (egg); 0.89-1.62 (liver); 1.52-1.82 (kidney); 9.03-11.17 (primary feathers); 0.67-0.83 (breast muscle); 0.44-0.59 (brain); 0.51-0.65 (ovary)	vi	123
METHYLMERCURY DICYANDIAMIDE	8 ppm diet	TOX-EXP IND - accumulation	mean Hg concentrations after 2 wk exposure	9.10 (whole body), 4.46 (carcass), 16.5 (liver), 17.6 (kidney) ppm, wet wt	vj	122
METHYLMERCURY DICYANDIAMIDE	0, 0.5, 3 ppm diet	TOX-EXP IND - accumulation	mercury concentrations in eggs (at plateau)	1 (@ 0.5 ppm), 6.46-9.19 (@ 3 ppm) ppm in eggs	vk	124
METHYLMERCURY DICYANDIAMIDE	control and 0.5 mg Hg/kg diet (Hg as methylmercury dicyandiamide)	TOX-EXP IND - accumulation	range of mean Hg (ppm wet-weight) concentrations in wild-strain males and females	0.51-0.54 ppm blood, 2.07-2.41 ppm kidney, 2.35-2.26 ppm liver, 0.74-0.97 ppm breast muscle, 0.47-0.51 ppm brain, 0.88 ppm eggs @ 0.5 ppm in diet	vl	125
METHYLMERCURY DICYANDIAMIDE	0,0.5,3 ppm diet	TOX-Non-Repro-Sublethal - behavioral effects	changes in approach behavior (maternal call stimulus)	increased @ 0.5, 3 ppm	vm	126
METHYLMERCURY DICYANDIAMIDE	0,0.5,3 ppm diet	TOX-Non-Repro-Sublethal - behavioral effects	changes in avoidance behavior (frightening stimulus)	increased @ 0.5, 3 ppm	vn	126
METHYLMERCURY DICYANDIAMIDE	0, 0.5 ppm Hg in diet	TOX-Non-Repro-Sublethal - behavioral effects	food consumption versus controls	increased in 2nd generation	vo	123
METHYLMERCURY DICYANDIAMIDE	0, 0.5 ppm Hg in diet	TOX-Non-Repro-Sublethal - whole animal	body weight versus controls	no effect	vp	123
METHYLMERCURY DICYANDIAMIDE	0, 0.5 ppm Hg in diet	TOX-REPRO - behavior	proportion of eggs laid outside nestbox	increased in 2nd generation	vq	123
METHYLMERCURY DICYANDIAMIDE	0, 0.5, 3 ppm diet	TOX-REPRO - development	incidence of brain lesions (demyelination, necrosis, neuronal shrinkage)	increased @ 3 ppm	vr	127
METHYLMERCURY DICYANDIAMIDE	0, 0.5 ppm Hg in diet	TOX-REPRO - development	proportion of ducklings responding to approach and avoidance stimuli	decreased in 3rd generation	vs	123
METHYLMERCURY DICYANDIAMIDE	0, 0.5, 3 ppm diet	TOX-REPRO - physiology	duration of egg production compared to controls	decreased @ 0.5, 3 ppm	vt	124

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
METHYLMERCURY DICYANDIAMIDE	0, 0.5 ppm Hg in diet	TOX-REPRO - physiology	eggshell thickness versus controls	decreased in 3rd generation	vu	123
METHYLMERCURY DICYANDIAMIDE	0, 0.5, 3 ppm diet	TOX-REPRO - physiology	mean egg weight compared to controls	decreased @ 3 ppm	vv	124
METHYLMERCURY DICYANDIAMIDE	0, 0.5, 3 ppm diet	TOX-REPRO - reproductive success	duckling survival	decreased @ 3 ppm	vw	127
METHYLMERCURY DICYANDIAMIDE	0, 0.5 ppm Hg in diet	TOX-REPRO - reproductive success	hatchability and duckling survival versus controls	no effect	vx	123
METHYLMERCURY DICYANDIAMIDE	0, 0.5, 3 ppm diet	TOX-REPRO - reproductive success	hatching success and 1 wk survival of hatchlings compared to controls	decreased @ 3 ppm	vy	124
METHYLPARATHION	400 ppm diet, beginning at egg laying, early incubation, or late incubation periods	TOX-MORT - dose-response data	incidence of adult mortality during incubation compared with controls	2/12 when treatment initiated during early incub.; 2/11 when treatment initiated during late incub.	vz	128
METHYLPARATHION	400 ppm diet, beginning at egg laying, early incubation, or late incubation periods	TOX-Non-Repro-Sublethal - behavioral effects	food consumption compared with controls	decreased when treatment initiated during laying, early or late incub.	wa	128
METHYLPARATHION	400 ppm diet, beginning at egg laying, early incubation, or late incubation periods	TOX-Non-Repro-Sublethal - behavioral effects	incidence of nest abandonment compared with controls	increased when treatment initiated during early or late incub.	wb	128
METHYLPARATHION	400 ppm diet, beginning at egg laying, early incubation, or late incubation periods	TOX-REPRO - physiology	proportion of hens laying and number of eggs laid per hen compared to controls	decreased if treatment initiated during egg laying	wc	128
METHYLPARATHION	400 ppm diet, beginning at egg laying, early incubation, or late incubation periods	TOX-REPRO - reproductive success	number of eggs per incubated nest and percent fertility of eggs compared with controls	no effect	wd	128
METHYLPARATHION	400 ppm diet, beginning at egg laying, early incubation, or late incubation periods	TOX-REPRO - reproductive success	number of hatchlings per nest, percent hatchability, hatchling survival and body weight to 5 days compared with controls	no effect	we	128
MEXACARBATE	NR	TOX-MORT - toxicity benchmarks	LD50	3.0 mg/kg	wf	129
MEXACARBATE	NR	TOX-MORT - toxicity benchmarks	LD50's determined at ages 48 hr, 7 d, 14 d, 30 d and 60 d, respectively (95% CI in parenth.)	3.16 (2.17-4.61), 4.11 (2.70-6.26), 3.61 (2.37-5.49), 3.23 (2.72-3.85), 2.72(2.28-3.23)	wg	5
MONOCROTOPHOS	NR	TOX-MORT - toxicity benchmarks	LD50's determined at ages 36 hr, 7 d, 30 d, and 6 mos, respectively (95% CI in parenth.)	5.86 (4.70-7.29), 7.21 (5.79-8.98), 5.10 (4.44-5.86), 3.36 (2.77-4.09)	wh	5
N-BUTYL ALCOHOL	0, 10%, 100% solution	TOX-REPRO - development	embryo survival through incubation day 18 versus controls	0 survival @ 100% solution, incubation days 3 or 8 exposure	wi	4
NICKEL SULFATE	0,12.5,50,200,800 ppm diet	TOX-EXP IND - accumulation	kidney, blood, liver, and feather concentrations of Ni compared to controls	increased @ 12.5, 50, 200, 800 ppm diet	wj	130
NICKEL SULFATE	0,12.5,50,200,800 ppm diet	TOX-EXP IND - accumulation	mean tissue concentrations @ 800 ppm Ni in diet	1.94 (kidney), 0.52 (liver), 0.139 (blood), 68.06 (feathers) ppm, wet wt	wk	130
NICKEL SULFATE	0,200,800,1200 ppm in diet	TOX-EXP IND - accumulation	Ni concentrations (ranges) in liver and kidney in ducklings that died @ 1200 ppm	1.0-22.7 (liver), 2.7-74.4 (kidney) ppm, wet wt	wl	131
NICKEL SULFATE	0,200,800,1200 ppm in diet	TOX-MORT - dose-response data	incidence of clinical signs and mortality	increased @ 800, 1200 ppm	wm	131
NICKEL SULFATE	0,12.5,50,200,800 ppm diet	TOX-Non-Repro-Sublethal - behavioral effects	food consumption compared to controls	increased @ 200, 800 ppm	wn	130

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
NICKEL SULFATE	0,12.5,50,200,800 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma biochemistry compared to controls	no effects	wo	130
NICKEL SULFATE	0,200,800,1200 ppm in diet	TOX-Non-Repro-Sublethal - whole animal	bill length	no effect	wp	131
NICKEL SULFATE	0,200,800,1200 ppm in diet	TOX-Non-Repro-Sublethal - whole animal	body wt by 28 d of age	decreased @ 1200 ppm	wq	131
NICKEL SULFATE	0,12.5,50,200,800 ppm diet	TOX-Non-Repro-Sublethal - whole animal	body wt, liver wt:brain wt, kidney wt:brain wt, duodenal wt compared to controls	no effects	wr	130
NICKEL SULFATE	0,200,800,1200 ppm in diet	TOX-Non-Repro-Sublethal - whole animal	organ wt:body wt ratios	no effect	ws	131
NICKEL SULFATE	0,200,800,1200 ppm in diet	TOX-Non-Repro-Sublethal - whole animal	weight:length of humerus	decreased @ 1200 pmm (30 d of age)	wt	131
NICKEL SULFATE	0,200,800,1200 ppm in diet	TOX-Non-Repro-Sublethal - whole animal	weight:length of humerus	decreased @ all doses (by 60 d of age)	wu	131
NICKEL SULFATE	0,12.5,50,200,800 ppm diet	TOX-REPRO - reproductive success	reproductive success (number of eggs laid, hatchability, duckling survival) compared to controls	no effects	wv	130
PARAQUAT	3-6 doses (lbs/acre) @ 100 gal emulsifiable concn. in water/acre	TOX-MORT - toxicity benchmarks	LC50	1.5 lbs AI/acre (slope = 1.66) for exposure of 3d embryo; 2.5 lbs AI/acre (slope = 1.40) for exposure of 8d embryo	ww	115
PARAQUAT	3-6 doses (lbs/acre) @ 11 gal oil base carrier/acre	TOX-MORT - toxicity benchmarks	LC50	0.1 lbs AI/acre (slope = 2.10) for exposure of 3d embryo; 0.2 lbs AI/acre (slope = 3.29) for exposure of 8d embryo	wx	115
PARATHION	0, 1.75 mg/kg bw	TOX-MORT - dose-response data	mortality incidence by 20 hrs post-dose	4/36	wy	2
PARATHION	0, 5 mg/L in water of dietary tadpoles (96 hours)	TOX-MORT - dose-response data	percent mortality	100% @ 5mg/L	wz	3
PARATHION	logarithmically spaced does up to 1 mg/L in water of dietary tadpoles (96 hours)	TOX-MORT - dose-response data	percent mortality	100% @ 1 mg/L	xa	3
PARATHION	0.75, 7.5 lb/acre simulated, aqueous	TOX-MORT - toxicity benchmarks	LC50, exposed on day 3 or 8 of incubation	41(day 3), 39 (day 8) lb/acre	xb	77
PARATHION	0, 0.08, 0.8 lb/acre simulated, oil	TOX-MORT - toxicity benchmarks	LC50, exposed on day 3 or 8 of incubation	2.2 (day 3), 1.5 (day 8) lb/acre	xc	77
PARATHION	NR	TOX-MORT - toxicity benchmarks	LD50	1.65 mg/kg	xd	5
PARATHION	NR	TOX-MORT - toxicity benchmarks	LD50	1.44 mg/kg	xe	5
PARATHION	NR	TOX-MORT - toxicity benchmarks	LD50	1.65 mg/kg	xf	5
PARATHION	NR	TOX-MORT - toxicity benchmarks	LD50	2.34 mg/kg	xg	5
PARATHION	0, 5 mg/L in water of dietary tadpoles (96 hours)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain acetylcholinesterase activity compared with controls	0.8% @ 5 mg/L	xh	3
PARATHION	logarithmically spaced does up to 1 mg/L in water of dietary tadpoles (96 hours)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain acetylcholinesterase activity compared with controls	9% @ 1 mg/L	xi	3
PARATHION	0, 1.75 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain cholinesterase inhibition compared with controls	74.6% (12.4 SE)	xj	2

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
PARATHION	0.75, 7.5 lb/acre simulated, aqueous; 0, 1.4, 14.0 lb/acre simulated, oil	TOX-REPRO - development	crown-rump length at day 18 of incubation compared with controls	decreased @ 7.5 lb/acre (aqueous); 0.08, 0.8 lb/acre (oil)	xk	77
PARATHION	0, 0.75, 7.5 lb/acre simulated, aqueous; 0, 0.08, 0.8 lb/acre simulated, oil	TOX-REPRO - development	embryo weight by day 18 of incubation compared with controls	decreased @ 0.75, 7.5 (aqueous) or 0.8 (oil) lb/acre	xl	77
PARATHION	control, 10 ppm	TOX-REPRO - development	progeny growth (average body weights) at hatch to 6 wks of age	no effect	xm	83
PARATHION	control, 10 ppm	TOX-REPRO - physiology	egg production and fertility, compared to controls	no effect	xn	83
PARATHION	control, 10 ppm	TOX-REPRO - physiology	eggshell thickness, compared to controls	decrease	xo	83
PARATHION	control, 10 ppm	TOX-REPRO - reproductive success	% hatchability, compared to controls	no effect	xp	83
PENTACHLOROPHENOL	25.0, 54.2, 105.0, 233.2, 423.2, 961.0 ug/g diet	TOX-EXP IND - accumulation	mean +/- SD tissue concentrations at the reported LOAEL (development)	22.2 +/- 5.5 ug/g lipid, 30.7 +/- 10.3 ug/g liver, 11.0 +/- 0 ug/g muscle, 4.0 +/- 1.4 ug/g brain at 961 ug/g diet	xq	132
PENTACHLOROPHENOL	25.0, 54.2, 105.0, 233.2, 423.2, 961.0 ug/g diet	TOX-EXP IND - accumulation	mean +/- SD tissue concentrations at the reported NOAEL (development)	12.2 +/- 2.3 ug/g lipid, 20.7 +/- 3.7 ug/g liver, 3.3 +/- 1.6 ug/g muscle, 2.6 +/- 1.5 ug/g brain at 423.2 ug/g diet	xr	132
PENTACHLOROPHENOL	25.0, 54.2, 105.0, 233.2, 423.2, 961.0 ug/g diet	TOX-REPRO - development	total body weight, compared to control; reported as the LOAEL for the study	decrease @ 961 ug/g	xs	132
PENTACHLOROPHENOL	25.0, 54.2, 105.0, 233.2, 423.2, 961.0 ug/g diet	TOX-REPRO - development	total body weight, compared to control; reported as the NOAEL for the study	no effect @ 423.2 ug/g	xt	132
PHOSPHORUS (YELLOW OR WHITE)	0, 1.0, 2.0, 3.4, 4.0, 6.5 mg/kg bw (pelletized)	TOX-EXP IND - accumulation	P4 concentration in fat versus dose	positive correlation	xu	133
PHOSPHORUS (YELLOW OR WHITE)	0, 17.3-19.7, 72.0-79.1, 243.3-260, 461-498.3, 900.7-1023.3 ug/g diet (range in measured concentrations over 4 wks)	TOX-MORT - dose-response data	incidence of mortality versus controls	increased @ 484.2, 972.0 ug/g diet (nominal concentrations)	xv	134
PHOSPHORUS (YELLOW OR WHITE)	0, 6.0, 7.9, 10.2, 13.5, 18.0 mg/kg bw (dissolved in corn oil)	TOX-MORT - toxicity benchmarks	24 hour median lethal dose	6.96 mg/kg bw (2.66-8.96 95% CI)	xw	133
PHOSPHORUS (YELLOW OR WHITE)	0, 2, 4, 5.2, 6.1, 7.1, 8.0, 9.1 mg/kg bw (dissolved in corn oil)	TOX-MORT - toxicity benchmarks	24 hour median lethal dose	6.46 mg/kg bw (5.19-7.69 95% CI)	xx	133
PHOSPHORUS (YELLOW OR WHITE)	0, 1.0, 2.0, 3.4, 4.0, 6.5 mg/kg bw (pelletized)	TOX-MORT - toxicity benchmarks	24 hour median lethal dose	3.90 mg/kg bw (3.24-4.69 95% CI)	xy	133
PHOSPHORUS (YELLOW OR WHITE)	0, 17.3-19.7, 72.0-79.1, 243.3-260, 461-498.3, 900.7-1023.3 ug/g diet (range in measured concentrations over 4 wks)	TOX-MORT - toxicity benchmarks	LC50	679.8 ug/g (194.3-442.6 95% CI)	xz	134
PHOSPHORUS (YELLOW OR WHITE)	0, 17.3-19.7, 72.0-79.1, 243.3-260, 461-498.3, 900.7-1023.3 ug/g diet (range in measured concentrations over 4 wks)	TOX-MORT - toxicity benchmarks	No Observable Effect Level, based on mortality, pathology, clinical signs	91.1 ug/g	ya	134
PHOSPHORUS (YELLOW OR WHITE)	0, 17.3-19.7, 72.0-79.1, 243.3-260, 461-498.3, 900.7-1023.3 ug/g diet (range in measured concentrations over 4 wks)	TOX-Non-Repro-Sublethal - behavioral effects	food consumption during first week of treatment versus controls	decreased @ 484.2, 972.0 ug/g (nominal concentrations)	yb	134
PHOSPHORUS (YELLOW OR WHITE)	0, 6.0, 7.9, 10.2, 13.5, 18.0 mg/kg bw (dissolved in corn oil)	TOX-Non-Repro-Sublethal - organ/system effects	liver to body weight ratio versus controls	increased above 4.3 mg/kg bw	yc	133

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
PHOSPHORUS (YELLOW OR WHITE)	0, 6.0, 7.9, 10.2, 13.5, 18.0 mg/kg bw (dissolved in corn oil)	TOX-Non-Repro-Sublethal - organ/system effects	relation between dose and frequency and severity of hepatic and kidney lesions	positive correlation	yd	133
PHOSPHORUS (YELLOW OR WHITE)	0, 6.0, 7.9, 10.2, 13.5, 18.0 mg/kg bw (dissolved in corn oil)	TOX-Non-Repro-Sublethal - organ/system effects	relation between liver to body weight ratio and dose	positive relationship	ye	133
PHOSPHORUS (YELLOW OR WHITE)	0, 6.0, 7.9, 10.2, 13.5, 18.0 mg/kg bw (dissolved in corn oil)	TOX-Non-Repro-Sublethal - whole animal	body weight versus controls	reduced above 6.2 mg/kg bw	yf	133
PHOSPHORUS (YELLOW OR WHITE)	0, 17.3-19.7, 72.0-79.1, 243.3-260, 461-498.3, 900.7-1023.3 ug/g diet (range in measured concentrations over 4 wks)	TOX-Non-Repro-Sublethal - whole animal	body weight versus controls	decreased @ 235.0, 484.2, 972.0 ug/g (nominal concentrations)	yg	134
PHOSPHORUS (YELLOW OR WHITE)	0, 17.3-19.7, 72.0-79.1, 243.3-260, 461-498.3, 900.7-1023.3 ug/g diet (range in measured concentrations over 4 wks)	TOX-Non-Repro-Sublethal - whole animal	incidence of clinical signs versus controls	increased @ 235.0, 484.2, 972.0 ug/g (nominal concentrations)	yh	134
POLYCHLORINATED BIPHENYLS	NR	TOX-REPRO - reproductive success	incidence of reproductive effects	review	yi	135
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)	control, 0.2, 2.0 mg/kg egg, mixture of 18 PAHs; injected into egg yolks	TOX-REPRO - development	embryonic mortality, compared to controls	increase @ 0.2, 2.0 mg/kg egg	yj	21
PROPOXUR	NR	TOX-MORT - toxicity benchmarks	LD50's determined at ages 36 hr, 7 d, 30 d, and 6 mos, respectively (95% CI in parenth.)	7.38 (5.97-9.14), 12.7 (10.2-15.9), 14.6 (12.4-17.4), 9.58 (7.61-12.1)	yk	5
RADIONUCLIDES	see citation for figure of whole-body residues at time 0	TOX-EXP IND - accumulation	mean biological half-lives for whole-body retention of 9 radionuclides; ducks exposed in field for varying time periods then depurated in laboratory to determine half-life	131I 10d; 140Ba 22d; 51Cr 86d; 58Co 32d; 75Se 26d; 65Zn 67d; 134Cs 10d; 60Co 67d; 137Cs 11 d	yl	136
RADIONUCLIDES	see citation for table radionuclide concentrations in water, plankton, periphyton, sediment	TOX-EXP IND - accumulation	table of mean concentrations of 6 radionuclides (238Pu, 239Pu, 241Am, 242Cm, 244Cm, 90Sr) in 6 mallard tissue types	see citation	ym	137
SALINE WATER	tap water (control),more saline water (20,000-67,000 umhos/cm); see citation for individual ion concentrations	TOX-MORT - dose-response data	mortality versus controls	increased @ 67,000 umhos/cm (100%), 35,000 umhos/cm (100%), 21,500 umhos/cm (78%), and 20,000 umhos/cm (60%)	yn	138
SALINE WATER	tap water (control),more saline water (20,000-67,000 umhos/cm); see citation for individual ion concentrations	TOX-Non-Repro-Sublethal - organ/system effects	thymus size versus controls	increased @ 20,000 umhos/cm and above	yo	138
SALINE WATER	tap water (control), less saline water (3750-7490 umhos/cm); see citation for individual ion concentrations	TOX-Non-Repro-Sublethal - whole animal	body weight by day 14 or 16 versus controls	decreased @ 4000 or 7720 umhos/cm	yp	138
SALINE WATER	tap water (control),more saline water (20,000-67,000 umhos/cm); see citation for individual ion concentrations	TOX-Non-Repro-Sublethal - whole animal	body weight by day 14 versus controls	decreased @ 20,000 and 21,500 umhos/cm	yq	138
SALINE WATER	tap water (control), less saline water (3750-7490 umhos/cm); see citation for individual ion concentrations	TOX-Non-Repro-Sublethal - whole animal	plasma protein levels; serum osmolality; salt, kidney and adrenal gland size versus controls	increased	yr	138
SELENITE, SODIUM	0.21-0.24 ug/kg bw	TOX-EXP IND - accumulation	figures and tables of selenium concentration over time (% of administered dose)	figure/table	ys	139
SELENITE, SODIUM	0, 10, 20, 40, or 80 ppm Se as sodium selenite	TOX-EXP IND - accumulation	mean liver concentrations (SE) in ducklings fed selenite that died	18(4.8) ppm, wet wt @ 40 ppm; 6.9(2.07) ppm, wet wt @ 80 ppm	yt	140

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
SELENITE, SODIUM	0,10,20,40 ppm diet	TOX-EXP IND - accumulation	Se concentrations in livers after 6 wks of treatment versus controls	increased to 0.4 (@ 0 ppm), 5.0 (@ 10 ppm), 3.2 (@ 20 ppm), 2.8 (@ 40 ppm) ppm, wet wt	yu	141
SELENITE, SODIUM	0,10,20,40 ppm diet	TOX-MORT - dose-response data	mortality compared to controls	increased @ 40 ppm (12.5%)	yv	141
SELENITE, SODIUM	0,10,20,40 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic malondialdehyde concentrations versus controls	increased @ 40 ppm	yw	141
SELENITE, SODIUM	0,10,20,40 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic protein concentrations versus controls	increased @ 20, 40 ppm	yx	141
SELENITE, SODIUM	0,10,20,40 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	incidence of altered hepatic glutathione metabolism versus controls	increased @ 10,20,40 ppm	yy	141
SELENITE, SODIUM; SELENOMETHIONINE	0, 3.5 mg Se/L (as sodium selenite); 2.2 mg Se/L (selenomethionine)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	serum ALT enzyme activity versus controls n high selenite and selenomethionine groups.	increased @ 3.5 mg/L (selenite) or 2.2 mg/L (selenomethionine)	yz	142
SELENITE, SODIUM; SELENOMETHIONINE	0, 0.5, 3.5 mg Se/L (sodium selenite); 2.2 mg Se/L (selenomethionine)	TOX-Non-Repro-Sublethal - organ/system effects	blood monocyte counts after 78 days exposure versus controls	decreased	za	142
SELENITE, SODIUM; SELENOMETHIONINE	0, 10, 20, 40, or 80 ppm Se as selenomethionine or sodium selenite	TOX-Non-Repro-Sublethal - whole animal	bw and liver wt versus controls	decreased (liver decreased with selenite only)	zb	140
SELENITE, SODIUM; SELENOMETHIONINE	0, 10, 20, 40, or 80 ppm Se as selenomethionine or sodium selenite	TOX-Non-Repro-Sublethal - whole animal	duckling mortality versus controls	increased @ 40, 80 ppm selenite or selenomethionine	zc	140
SELENITE, SODIUM; SELENOMETHIONINE	0, 10, 20, 40, or 80 ppm Se as selenomethionine or sodium selenite	TOX-Non-Repro-Sublethal - whole animal	food consumption versus controls	decreased	zd	140
SELENITE, SODIUM; SELENOMETHIONINE	0, 10 ppm Se as selenomethionine or sodium selenite	TOX-Non-Repro-Sublethal - whole animal	tarsus length, 10th primary length, heart weight versus controls	no effect	ze	140
SELENITE, SODIUM; SELENOMETHIONINE	0.2, 1, 5, 10, 25 ppm diet (as selenite); 10 ppm diet (as selenomethionine)	TOX-REPRO - development	number of embryos showing malformations or embryotoxicity compared to controls	increased @ 10,25 ppm (as selenite), 10 ppm (as selenomethionine)	zf	143
SELENITE, SODIUM; SELENOMETHIONINE	0.2, 1, 5, 10, 25 ppm diet (as selenite); 10 ppm diet (as selenomethionine)	TOX-REPRO - development	plasma glutathione peroxidase activity in hatchlings compared to controls	increased @ 5, 10, 25 ppm (as selenite), 10 ppm (as selenomethionine)	zg	143
SELENITE, SODIUM; SELENOMETHIONINE	0.2, 1, 5, 10, 25 ppm diet (as selenite); 10 ppm diet (as selenomethionine)	TOX-REPRO - development	plasma uric acid concentration in hatchlings versus controls	increased @ 25 ppm	zh	143
SELENITE, SODIUM; SELENOMETHIONINE	0.2, 1, 5, 10, 25 ppm diet (as selenite); 10 ppm diet (as selenomethionine)	TOX-REPRO - reproductive success	hatchability compared to controls	decreased @ 25 ppm (selenite), 10 ppm (selenomethionine)	zi	143
SELENIUM COMPOUNDS; SELENOMETHIONINE	0,15,30 ppm diet (as Se-L-met, Se-DL-met, yeast), or 15 ppm as wheat	TOX-EXP IND - accumulation	mean concentrations of Se in livers	11-12 (@ 15 ppm as Se-met or wheat), 6.2 (@ 15 ppm as yeast), 19-20 (@ 30 ppm as Se-met or wheat), 9.9 (@ 30 ppm as yeast) ppm, wet wt	zj	144

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
SELENIUM COMPOUNDS; SELENOMETHIONINE	0,30 ppm diet (as Se-L-met, Se-DL-met, yeast)	TOX-EXP IND - accumulation	mean Se concentrations in liver	25-27 (@ 30 ppm as Se-L-met or Se-DL-met), 13 (@ 30 ppm as yeast) ppm, wet wt	zk	144
SELENIUM COMPOUNDS; SELENOMETHIONINE	0, 10.3 ppm Se as seleno-L-methionine, 9.3 ppm Se as seleno-D,L-methionine, and 10.9 ppm Se as selenized yeast	TOX-EXP IND - accumulation	mean(SE) wet wt concentrations of selenium in 8th egg laid	9.2(0.52) ppm with seleno-D,L-methionine; 8.9(0.35) ppm with seleno-L-methionine; 6.6(0.37) ppm with selenized yeast	zl	145
SELENIUM COMPOUNDS; SELENOMETHIONINE	0,15,30 ppm diet (as Se-L-met, Se-DL-met, yeast), or 15 ppm as wheat	TOX-MORT - dose-response data	survival rate compared to controls	decreased @ 30 ppm as Se-L-met	zm	144
SELENIUM COMPOUNDS; SELENOMETHIONINE	0,30 ppm diet (as Se-L-met, Se-DL-met, yeast)	TOX-MORT - dose-response data	survival rate compared to controls	no effect	zn	144
SELENIUM COMPOUNDS; SELENOMETHIONINE	0,15,30 ppm diet (as Se-L-met, Se-DL-met, yeast), or 15 ppm as wheat	TOX-Non-Repro-Sublethal - behavioral effects	food consumption compared to controls	decreased @ 30 ppm as Se-met or yeast, or 15 ppm as wheat	zo	144
SELENIUM COMPOUNDS; SELENOMETHIONINE	0,30 ppm diet (as Se-L-met, Se-DL-met, yeast)	TOX-Non-Repro-Sublethal - behavioral effects	food consumption compared to controls	decreased @ 30 ppm (as Se-met or yeast)	zp	144
SELENIUM COMPOUNDS; SELENOMETHIONINE	control, 15, 30 ppm Se as seleno-D,L-methionine, seleno-L-methionine or selenized yeast	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma and liver GSH-peroxidase activity (for all Se forms), compared to controls	increase @ 15, 30 ppm	zq	146
SELENIUM COMPOUNDS; SELENOMETHIONINE	0,15,30 ppm diet (as Se-L-met, Se-DL-met, yeast), or 15 ppm as wheat	TOX-Non-Repro-Sublethal - whole animal	body weight compared to controls	decreased @ 30 ppm as Se-met or yeast	zr	144
SELENIUM COMPOUNDS; SELENOMETHIONINE	0,30 ppm diet (as Se-L-met, Se-DL-met, yeast)	TOX-Non-Repro-Sublethal - whole animal	body weights compared to controls	decreased @ 30 ppm (as Se-met or yeast)	zs	144
SELENIUM COMPOUNDS; SELENOMETHIONINE	0, 10.3 ppm Se as seleno-L-methionine, 9.3 ppm Se as seleno-D,L-methionine, and 10.9 ppm Se as selenized yeast	TOX-Non-Repro-Sublethal - whole animal	incidence of illness versus controls	no effect	zt	145
SELENIUM COMPOUNDS; SELENOMETHIONINE	0, 10.3 ppm Se as seleno-L-methionine, 9.3 ppm Se as seleno-D,L-methionine, and 10.9 ppm Se as selenized yeast	TOX-REPRO - development	body weight of 6 day old ducklings versus controls	reduced with selenized yeast	zu	145
SELENIUM COMPOUNDS; SELENOMETHIONINE	0, 10.3 ppm Se as seleno-L-methionine, 9.3 ppm Se as seleno-D,L-methionine, and 10.9 ppm Se as selenized yeast	TOX-REPRO - development	incidence of embryo deformities versus controls	increased with seleno-D,L-methionine, seleno-L-methionine, or selenized yeast	zv	145
SELENIUM COMPOUNDS; SELENOMETHIONINE	0, 10.3 ppm Se as seleno-L-methionine, 9.3 ppm Se as seleno-D,L-methionine, and 10.9 ppm Se as selenized yeast	TOX-REPRO - physiology	egg fertility, egg weight, eggshell thickness, and mean interval between laying of eggs versus controls	no effect	zw	145
SELENIUM COMPOUNDS; SELENOMETHIONINE	0, 10.3 ppm Se as seleno-L-methionine, 9.3 ppm Se as seleno-D,L-methionine, and 10.9 ppm Se as selenized yeast	TOX-REPRO - reproductive success	duckling survival compared to controls	reduced with seleno-L-methionine	zx	145
SELENIUM COMPOUNDS; SELENOMETHIONINE	0, 10.3 ppm Se as seleno-L-methionine, 9.3 ppm Se as seleno-D,L-methionine, and 10.9 ppm Se as selenized yeast	TOX-REPRO - reproductive success	hatchability versus controls	reduced with seleno-L-methionine or seleno-D,L-methionine	zy	145
SELENIUM COMPOUNDS; SELENOMETHIONINE	0, 10.3 ppm Se as seleno-L-methionine, 9.3 ppm Se as seleno-D,L-methionine, and 10.9 ppm Se as selenized yeast	TOX-REPRO - reproductive success	number of 6-day-old ducklings produced per female versus controls	reduced with seleno-D,L-methionine, seleno-L-methionine, or selenized yeast	zz	145
SELENOMETHIONINE	0, 15, or 60 ppm Se; with and without added methionine, and varying protein levels	TOX-EXP IND - accumulation	geometric mean Se concentration in liver (adequate protein in diet)	11.6 (@15 ppm diet), 48.6 (@ 60 ppm diet) ppm, wet wt	{a	147
SELENOMETHIONINE	10 ppm Se	TOX-EXP IND - accumulation	half life of selenium in tissues	liver: 18.7 d muscle: 30.1 d	{b	148

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
SELENOMETHIONINE	0, 10, 20, 40, 80 ppm Se in diet, wet wt	TOX-EXP IND - accumulation	mean (SE) dry wt concentrations of selenium in liver	33(7) ppm @ 10 ppm Se, 49(9) ppm @ 20 ppm Se, 87(11) ppm @ 40 ppm Se, 99(9) ppm in birds that died	{c	149
SELENOMETHIONINE	0, 10, 20, 40, or 80 ppm Se as selenomethionine	TOX-EXP IND - accumulation	mean liver concentrations (SE) in ducklings fed selenomethionine that died	60(14.2) ppm, wet wt @ 40 ppm; 51(5.2) ppm, wet wt @ 80 ppm	{d	140
SELENOMETHIONINE	15 ppm diet	TOX-EXP IND - accumulation	mean Se concentration in eggs	13-20 ppm, wet wt	{e	150
SELENOMETHIONINE	0,10,20,40 ppm diet	TOX-EXP IND - accumulation	Se concentrations in livers after 6 wks of treatment	increased to 4.8 (@ 10 ppm), 26.0 (@ 20 ppm), 68.0 (@ 40 ppm) ppm, wet wt	{f	141
SELENOMETHIONINE	0.2,1,2,4,8,16,32 ppm diet	TOX-EXP IND - accumulation	Se concentrations in liver versus controls	increased @ 2 ppm or greater	{g	151
SELENOMETHIONINE	10 ppm Se	TOX-EXP IND - accumulation	selenium accumulation equations	liver: C = 7.4(1-e^-0.382t) muscle: C = 8.0(1-e^-0.037t)	{h	148
SELENOMETHIONINE	0, 2.2 mg Se/L	TOX-EXP IND - accumulation	selenium concentrations in pectoral muscle	increased (12-fold)	{i	142
SELENOMETHIONINE	10 ppm, doubled weekly, Se	TOX-EXP IND - accumulation	selenium depuration equations	liver: C = 7.4e^-0.037t muscle: C = 5.6e^-0.023t liver at peak body burden: C = 22.6e^-0.246t + 2.5 e^-0.008t muscle at peak body burden: C = 6.4e^-0.029t Loss phase for blood at peak body burden: C = 12.0e^-0.071t	{j	148
SELENOMETHIONINE	0, 15, or 60 ppm Se; with and without added methionine, and varying protein levels	TOX-MORT - dose-response data	% survival versus controls	no effect	{k	147
SELENOMETHIONINE	0,10,20,40 ppm diet	TOX-MORT - dose-response data	mortality compared to controls	increased @ 40 ppm (25%)	{l	141
SELENOMETHIONINE	0, 10, 20, 40, 80 ppm Se in diet, wet wt	TOX-MORT - dose-response data	mortality versus controls	increased @ 80 ppm	{m	149
SELENOMETHIONINE	0, 1, 2, 4, or 8 ppm Se	TOX-Non-Repro-Sublethal - behavioral effects	distance run in 2 seconds from a fright stimulus vs controls	no effect	{n	152
SELENOMETHIONINE	0, 10, 20, 40, 80 ppm Se in diet, wet wt	TOX-Non-Repro-Sublethal - behavioral effects	feed consumption over time versus controls	decreased @ 80 ppm	{o	149
SELENOMETHIONINE	0.2,1,2,4,8,16,32 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hemoglobin concentration compared to controls	decreased @ 16, 32 ppm	{p	151
SELENOMETHIONINE	0,10,20,40 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic malondialdehyde concentrations versus controls	increased @ 20, 40 ppm	{q	141
SELENOMETHIONINE	0,10,20,40 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	incidence of altered hepatic glutathione metabolism versus controls	increased @ 10,20,40 ppm	{r	141
SELENOMETHIONINE	0.2,1,2,4,8,16,32 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma alkaline phosphatase activity and total protein levels versus controls	increased @ 32 ppm	{s	151
SELENOMETHIONINE	0.2,1,2,4,8,16,32 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma glutathione peroxidase activity versus controls	increased @ 2 ppm or greater	{t	151

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
SELENOMETHIONINE	0, 15, or 60 ppm Se; with and without added methionine, and varying protein levels	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma GSH-peroxidase and alkaline phosphatase activities versus controls	increased @ 15 (GSH-peroxidase only), 60 ppm Se, adequate protein	{u	147
SELENOMETHIONINE	0, 2.2 mg Se/L	TOX-Non-Repro-Sublethal - organ/system effects	incidence of delayed hypersensitivity reactions to antigen versus controls	decreased	{v	142
SELENOMETHIONINE	0, 15, or 60 ppm Se; with and without added methionine, and varying protein levels	TOX-Non-Repro-Sublethal - organ/system effects	incidence of histopathological changes in livers versus controls	increased @ 15 ppm, 60 ppm (adequate protein, no methionine added)	{w	147
SELENOMETHIONINE	0.2,1,2,4,8,16,32 ppm diet	TOX-Non-Repro-Sublethal - organ/system effects	incidence of liver histopathological lesions, liver:body wt ratios versus controls	increased @ 32 ppm	{x	151
SELENOMETHIONINE	0, 10, 20, 40, 80 ppm Se in diet, wet wt	TOX-Non-Repro-Sublethal - organ/system effects	incidence of macroscopic abnormalities versus controls	increased in birds that died	{y	149
SELENOMETHIONINE	0.2,1,2,4,8,16,32 ppm diet	TOX-Non-Repro-Sublethal - organ/system effects	liver reduced gluthathione, oxidized glutathione, malondialdehyde concentrations versus controls	increased @ 16, 32 ppm	{z	151
SELENOMETHIONINE	0, 10, 20, 40, 80 ppm Se in diet, wet wt	TOX-Non-Repro-Sublethal - organ/system effects	mean weights of heart, spleen, pancreas, testis versus controls	decreased in birds that died	|a	149
SELENOMETHIONINE	0, 10, 20, 40, 80 ppm Se in diet, wet wt	TOX-Non-Repro-Sublethal - whole animal	body weight over exposure period versus controls	decreased @ 40 and 80 ppm	|b	149
SELENOMETHIONINE	0.2,1,2,4,8,16,32 ppm diet	TOX-Non-Repro-Sublethal - whole animal	body weight, liver DNA:RNA ratio, hematocrit compared to controls	decreased @ 32 ppm	|c	151
SELENOMETHIONINE	0, 15, or 60 ppm Se; with and without added methionine, and varying protein levels	TOX-Non-Repro-Sublethal - whole animal	body, liver and spleen weights, and tarsus length versus controls	decreased @ 60 ppm (regardless of methionine suppl. or protein levels)	|d	147
SELENOMETHIONINE	0,10,20,40 ppm diet	TOX-Non-Repro-Sublethal - whole animal	hepatic protein concentrations versus controls	decreased @ 20, 40 ppm	|e	141
SELENOMETHIONINE	0, 10, 20, 40, 80 ppm Se in diet, wet wt	TOX-Non-Repro-Sublethal - whole animal	histological changes to nervous system, bones, feathers, feather follicles, claws and scaled skin versus controls	no effect	|f	153
SELENOMETHIONINE	0, 10, 20, 40, 80 ppm Se in diet, wet wt	TOX-Non-Repro-Sublethal - whole animal	histological changes to skin (loss of fat), muscle, liver, pancreas, kidney, lymph nodes, spleen, seminiferous tubules	increased in birds that died, and in some 40 ppm survivors	|g	153
SELENOMETHIONINE	0, 10, 20, 40, 80 ppm Se in diet, wet wt	TOX-Non-Repro-Sublethal - whole animal	incidence of macroscopic abnormalities of muscles, claws and feathers versus controls	increased @ 40 ppm	|h	149
SELENOMETHIONINE	0.2, 1, 2, 4, 8, 16 ppm diet (as selenomethionine)	TOX-REPRO - development	incidence of malformed embyros compared to controls	increased @ 8, 16 ppm	|i	143
SELENOMETHIONINE	0.2, 1, 2, 4, 8, 16 ppm diet (as selenomethionine)	TOX-REPRO - reproductive success	hatchability compared to controls	decreased @ 8, 16 ppm	|j	143
SEWAGE SLUDGE	control, 5%, 20% Milorganite or Metrogro	TOX-EXP IND - accumulation	liver cadmium concentrations; compared to controls	increase @ 20% Milorganite or Metrogro	|k	154
SEWAGE SLUDGE	control, 5%, 20% Milorganite or Metrogro	TOX-Non-Repro-Sublethal - organ/system effects	immune defenses; resistance to Pasturella multocida estimated by % mortality 14 d after challenge, compared to controls	no effect	|l	154
SODIUM MONOFLUOROACETATE	NR	TOX-MORT - toxicity benchmarks	LD50's determined at ages 36 hr, 7 d, 30 d, and 6 mos, respectively (95% CI in parenth.)	9.78 (6.31-15.2), 3.71 (2.50-5.48), 3.71, 4.81 (2.57-8.99)	|m	5
STEEL COMPOUNDS; TRIBUTYLTIN	three #4 steel shot or three #4 tributyltin shot implants	TOX-Non-Repro-Sublethal - cellular/biochemical effects	white blood cell counts, monocyte counts, total protein concentrations over study period	increased in both groups (no treatment diffs)	|n	155

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
STEEL COMPOUNDS; TRIBUTYLTIN	three #4 steel shot or three #4 tributyltin shot implants	TOX-Non-Repro-Sublethal - whole animal	overall response score (inflammation, muscle damage changes)	increased with steel shot, wk 8	|o	155
STRYCHNINE	19.7 - 85.1 mg strychnine/kg ingesta	TOX-MORT - mortality in the field	strychnine poisoning via grain bait diagnosed as cause of death in free-flying mallards	increase	|p	156
TOXAPHENE (POLYCHLORINATED CAMPHENES)	3-6 doses (lbs/acre) @ 100 gal emulsifiable concn./acre	TOX-MORT - toxicity benchmarks	LC50	108 lbs AI/acre (slope = 1.62) for exposure of 3d embryo; 101 lbs AI/acre (slope = 3.06) for exposure of 8d embryo	|q	115
TOXAPHENE (POLYCHLORINATED CAMPHENES)	3-6 doses (lbs/acre) @ 11 gal oil base carrier/acre	TOX-MORT - toxicity benchmarks	LC50	66 lbs AI/acre for exposure of 3d embryo; 66 lbs AI/acre for exposure of 8d embryo	|r	115
TOXAPHENE (POLYCHLORINATED CAMPHENES)	NR	TOX-MORT - toxicity benchmarks	LD50's determined at ages 36 hr, 7 d, and 6 mos, respectively (95% CI in parenth.)	130 (80.4-210), 30.8 (23.3-40.6), 70.7 (37.6-133)	|s	5
TRICHLOROPHENOXYACETIC ACID (2,4,5-)	3-6 doses (lbs/acre) @ 100 gal emulsifiable concn./acre	TOX-MORT - toxicity benchmarks	LC50	106 lbs AI/acre (slope = 3.7) for exposure of 3d embryo; 116 lbs AI/acre (slope = 3.8) for exposure of 8d embryo	|t	115
TRICHLOROPHENOXYACETIC ACID (2,4,5-)	3-6 doses (lbs/acre) @ 11 gal oil base carrier/acre	TOX-MORT - toxicity benchmarks	LC50	44 lbs AI/acre for exposure of 3d embryo; 44 lbs AI/acre for exposure of 8d embryo	|u	115
TRIETHYLTIN CHLORIDE	control, 0.5, 5.0, 50 ppm (Sn) as triethyltin chloride	TOX-MORT - dose-response data	% mortality, compared to controls	no effect	|v	157
TRIETHYLTIN CHLORIDE	control, 0.5, 5.0, 50 ppm (Sn) as triethyltin chloride	TOX-Non-Repro-Sublethal - whole animal	body weight, compared to control	decrease @ 50 ppm	|w	157
TRIMETHYLTIN CHLORIDE	control, 0.5, 5.0, 50 ppm (Sn) as trimethyltin chloride	TOX-MORT - dose-response data	% mortality (100% mortality within 5 d for 50 ppm dose), compared to controls	increase @ 5, 50 ppm	|x	157
TRIMETHYLTIN CHLORIDE	control, 0.5, 5.0, 50 ppm (Sn) as trimethyltin chloride	TOX-Non-Repro-Sublethal - cellular/biochemical effects	cephalic tumor incidence	increase @ 5 ppm	|y	157
TRIMETHYLTIN CHLORIDE	control, 0.5, 5.0, 50 ppm (Sn) as trimethyltin chloride	TOX-Non-Repro-Sublethal - cellular/biochemical effects	incidence of mild to marked degeneration of neurons of the pons, medulla oblongata, gray matter of the spinal cord and pyrimidal cells of the cerebral cortex; mild to moderate lympoid depletion of spleen and thymus; atrophy of myofibers in skeletal and cardiac muscle.	increase @ 50 ppm	|z	157
TRIMETHYLTIN CHLORIDE	control, 0.5, 5.0, 50 ppm (Sn) as trimethyltin chloride	TOX-Non-Repro-Sublethal - whole animal	body weight	17% decrease @ 5 ppm	}a	157
VANADYL SULFATE	0, 1, 10, 100 ppm diet	TOX-EXP IND - accumulation	mean (SE) vanadium concentrations @ 100 ppm dose in brain, fat, kidney, liver, and femur	brain, 9(1); fat, 20(11); kidney, 273(49); liver, 657(113), male femur 274(47); female femur 3327(2208) ppm, wet wt	}b	158
VANADYL SULFATE	0, 1, 10, 100 ppm diet	TOX-EXP IND - accumulation	vanadium concentration in blood (sampled at 3 wk intervals)	increased @ 100 ppm (maximum = 106 +/- 19 ppb, wet wt)	}c	158
VANADYL SULFATE	0, 1, 10, 100 ppm diet	TOX-EXP IND - accumulation	vanadium concentration in eggs	<0.02 ppb, wet wt @ 1, 10 ppm; 63 ppb, wet wt @ 100 ppm	}d	158
VANADYL SULFATE	0, 1, 10, 100 ppm diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma cholesterol levels in drakes and laying hens	increased @ 100 ppm	}e	158
VANADYL SULFATE	0, 1, 10, 100 ppm diet	TOX-Non-Repro-Sublethal - whole animal	body weight and food consumption compared among groups	no effect	}f	158

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
XYLENE	0, 1%, 10% solution	TOX-REPRO - development	embryo survival, size, and incidence of abnormalities through incubation day 18 versus controls	no effect	}g	4

Notes

a Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; N=30 eggs/group; Age=incubation day 3-8; Tox Exp Tech=eggshell surface application; Tox Exp Dur=single; Tox Study Dur=varied with compound; Tox Stat Sig=Y

b Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; N=30 eggs/group; Age=incubation day 3-8; Tox Exp Tech=eggshell surface application; Tox Exp Dur=single; Tox Study Dur=varied with compound; Tox Stat Sig=Y

c Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=30560-19-1; TOX - Dose-Response Data Format=DR Table; N=36/dose; Age=14 d; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=1-17 days post-dose; Tox Stat Sig=NR

d Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=30560-19-1; N=4-5/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

e Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=30560-19-1; N=4-5/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

f Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=30560-19-1; TOX - Dose-Response Data Format=DR Table; N=36/dose; Age=14 d; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=1-17 days post-dose; Tox Stat Sig=NR; See citation for estimated times to recovery of brain cholinesterase after dosing.

g Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=67-64-1; TOX - Dose-Response Data Format=DR Table; N=30 eggs/group; Age=3 or 8 days of incubation (time of treatment); Tox Exp Tech=egg immersion; Tox Exp Dur=single 30 second exposure; Tox Study Dur=18 d; Tox Stat Sig=Y

h Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=67-64-1; TOX - Dose-Response Data Format=DR Table; N=30 eggs/group; Age=3 or 8 days of incubation (time of treatment); Tox Exp Tech=egg immersion; Tox Exp Dur=single 30 second exposure; Tox Study Dur=18 d; Tox Stat Sig=Y

i Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=116-06-3; N=5; Age=36 hours; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

j Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=116-06-3; N=5; Age=7 days; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

k Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=116-06-3; N=5; Age=30 days; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

l Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=116-06-3; N=5; Age=6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

m Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; TOX - Dose-Response Data Format=DR Table; N=12-14/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

n Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; N=8/dose; Tox Exp Tech=diet; Tox Exp Dur=15 d; Tox Study Dur=15 d; Tox Stat Sig=NR

o Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; TOX - Dose-Response Data Format=DR Table; N=12-14/group; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

p Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; N=8/dose; Tox Exp Tech=diet; Tox Exp Dur=15 d; Tox Study Dur=15 d; Tox Stat Sig=N

q Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=12-14/group; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

r Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; N=8/dose; Tox Exp Tech=diet; Tox Exp Dur=15 d; Tox Study Dur=15 d; Tox Stat Sig=Y

s Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; TOX - Dose-Response Data Format=DR Table; N=12-14/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y; Femur mass was not different among LL, LH, and NN diets after 10 wks.

t Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; TOX - Dose-Response Data Format=DR Table; N=12-14/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

u Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=12-14/group; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

v Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; TOX - Dose-Response Data Format=DR Table; N=12-14/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=NR; See table for specific clinical signs observed.

w Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; TOX - Dose-Response Data Format=DR Table; N=12-14/group; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

x Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; TOX - Chemical=7664-93-9; TOX - Dose-Response Data Format=DR Table; N=8 birds/treatment; Age=3 d; Tox Exp Tech=diet; Tox Exp Dur=15 d; Tox Study Dur=15 d; Tox Stat Sig=Y; No differences were observed compared with pairfed controls.

y Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-01-31; TOX - Chemical=7664-93-9; TOX - Dose-Response Data Format=DR Table; N=8 birds/treatment; Age=3 d; Tox Exp Tech=diet; Tox Exp Dur=15 d; Tox Study Dur=15 d; Tox Stat Sig=Y; No differences observed compared to pairfed controls, except in for ash content.

z Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=53469-21-9; N=12 pairs/dose; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=NR

aa Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=53469-21-9; N=12 pairs/dose; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=NR

ab Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=53469-21-9; N=12 pairs/dose; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=Y

ac Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=53469-21-9; N=12 pairs/dose; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=N

ad Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=53469-21-9; N=12 pairs/dose; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=Y

ae Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=53469-21-9; N=12 pairs/dose; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=N

af Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; N=10; Tox Exp Tech=diet; Tox Exp Dur=at least one month; Tox Study Dur=until ducklings were 3 wks old; Tox Stat Sig=NR

ag Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; N=19 eggs; Tox Exp Tech=diet; Tox Exp Dur=at least one month; Tox Study Dur=until ducklings were 3 wks old; Tox Stat Sig=NR

ah Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; N=22 pairs; Tox Exp Tech=diet; Tox Exp Dur=at least one month; Tox Study Dur=until ducklings were 3 wks old; Tox Stat Sig=NR

ai Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; TOX - Dose-Response Data Format=DR Figure; N=6-12/dose; Age=1-2 yr; Tox Exp Tech=oral gavage; Tox Exp Dur=twice/wk for 5 wks; Tox Study Dur=5 wks; Tox Stat Sig=Y; Maximum activities observed at 100 mg/kg bw.

aj Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; N=10/dose; Tox Exp Tech=diet; Tox Exp Dur=50 - 52 d; Tox Study Dur=50 - 52 d; Tox Stat Sig=NR

ak Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; N=22 pairs; Tox Exp Tech=diet; Tox Exp Dur=at least one month; Tox Study Dur=until ducklings were 3 wks old; Tox Stat Sig=N

al Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; TOX - Dose-Response Data Format=DR Figure; N=6-12/dose; Age=1-2 yr; Tox Exp Tech=oral gavage; Tox Exp Dur=twice/wk for 5 wks; Tox Study Dur=5 wks; Tox Stat Sig=Y; Plasma glucose decreased significantly on day 35 in treated birds.

am Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; TOX - Dose-Response Data Format=DR Table; N=6-12/dose; Age=1-2 yr; Tox Exp Tech=oral gavage; Tox Exp Dur=twice/wk for 5 wks; Tox Study Dur=5 wks; Tox Stat Sig=Y; No effect observed on antibody titers to sheep red blood cells, natural killer cell activity, or ConA-facilitated cytotoxicity.

an Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; TOX - Dose-Response Data Format=DR Figure; N=6-12/dose; Age=1-2 yr; Tox Exp Tech=oral gavage; Tox Exp Dur=twice/wk for 5 wks; Tox Study Dur=5 wks; Tox Stat Sig=Y

ao Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; TOX - Dose-Response Data Format=DR Table; N=6-12/dose; Age=1-2 yr; Tox Exp Tech=oral gavage; Tox Exp Dur=twice/wk for 5 wks; Tox Study Dur=5 wks; Tox Stat Sig=Y; No effect observed on spleen or body weights.

ap Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; N=15/dose; Age=1d at initiation; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=Y; significance of effects at specific doses not reported

aq Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; N=10 hens/dose; 8-9 eggs/dose; Tox Exp Tech=diet; Tox Exp Dur=50 - 52 d; Tox Study Dur=50 - 52 d; Tox Stat Sig=N

ar Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; N=5/group; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=10 d; Tox Stat Sig=NR; Caused short term (less than 6 d) egg shell thinning.

as Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; N=22 pairs; Tox Exp Tech=diet; Tox Exp Dur=at least one month; Tox Study Dur=until ducklings were 3 wks old; Tox Stat Sig=N; See paper for reproductive parameters measured.

at Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; TOX - Chemical=72-55-9; N=13; Tox Exp Tech=diet; Tox Exp Dur=7-128 d; Tox Study Dur=7-128 d; Tox Stat Sig=NR

au Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; TOX - Chemical=72-55-9; N=10/dose; Tox Exp Tech=diet; Tox Exp Dur=50 - 52 d; Tox Study Dur=50 - 52 d; Tox Stat Sig=NR

av Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; TOX - Chemical=72-55-9; N=10 hens/dose; 8 eggs/dose; Tox Exp Tech=diet; Tox Exp Dur=50 - 52 d; Tox Study Dur=50 - 52 d; Tox Stat Sig=Y

aw Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; TOX - Chemical=72-55-9; N=6-8 eggs/group from 10 hens; Tox Exp Tech=Diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Yes; Aroclor-1254 was not as potent as DDE, and did not further reduction in numbers of mammillary cores when combined with DDE.

ax Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=11097-69-1; TOX - Chemical=72-55-9; N=10/dose; Tox Exp Tech=diet; Tox Exp Dur=50 - 52 d; Tox Study Dur=50 - 52 d; Tox Stat Sig=NR

ay Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; N=30 birds/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

az Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; TOX - Dose-Response Data Format=DR Table; N=30 birds/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

ba Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; N=30 birds/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=N

bb Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; N=30 birds/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=N

bc Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; TOX - Dose-Response Data Format=DR Table; TOX - Dose-Response Data Format=DR Table; N=30 birds/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

bd Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; TOX - Dose-Response Data Format=DR Table; N=30 birds/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y; See citation for specific plasma chemistries measured.

be Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; TOX - Dose-Response Data Format=DR Table; N=30 birds/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

bf Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; N=30 birds/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=N

bg Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; TOX - Dose-Response Data Format=DR Figure; N=30 birds/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

bh Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; TOX - Dose-Response Data Format=DR Figure; N=30 birds/group; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

bi Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; Effect was reduced when arsenic was added to the diet.

bj Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y

bk Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; See citation for other plasma constituent effects of Se and As.

bl Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y

bm Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7778-43-0; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; Selenium effect was reduced when arsenic was added to the diet.

bn Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=77784-46-5; N=5/group; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=6 d; Tox Stat Sig=NR; Caused short term (less than 6 d) egg shell thinning.

bo Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=3337-71-1; TOX - Dose-Response Data Format=DR Table; N=10/dose; Age=7 d; Tox Exp Tech=oral; Tox Exp Dur=single; Tox Study Dur=21 d; Tox Stat Sig=NR; LD50 estimated at >4000 mg/kg.

bp Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=3337-71-1; TOX - Dose-Response Data Format=DR Table; N=10/dose; Age=7 d; Tox Exp Tech=diet; Tox Exp Dur=5 d; Tox Study Dur=8 d; Tox Stat Sig=NR

bq Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=3337-71-1; TOX - Dose-Response Data Format=DR Table; N=10/dose; Age=7 d; Tox Exp Tech=diet; Tox Exp Dur=5 d; Tox Study Dur=8 d; Tox Stat Sig=NR

br Adult; NJ; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=22781-23-3; N=4 ducks; Condition=dead; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y; Birds were found dead in the field and studied post-mortem in the laboratory.

bs Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=207-08-9; TOX - Dose-Response Data Format=DR Table; N=20/dose; Age=5 d of incubation; Tox Exp Tech=in ovo; Tox Exp Dur=single; Tox Study Dur=24 d of incubation; Tox Stat Sig=Y

bt Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; N=20 males, 20 females per group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=30 d; Tox Study Dur=30 d; Tox Stat Sig=Y; See tables in paper for concentrations of essential elements and lead in tissues of treated birds.

bu Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; N=20 males, 20 females per group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=30 d; Tox Study Dur=30 d; Tox Stat Sig=Y; See tables in paper for concentrations of essential elements and lead in tissues of treated birds. Hepatic calcium was decreased in Fe-treated birds. Renal and hepatic iron was higher in Fe-treated birds than in controls or Bi-treated birds.

bv Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; N=20 males, 20 females per group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=30 d; Tox Study Dur=30 d; Tox Stat Sig=N

bw Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; N=20 males, 20 females per group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=30 d; Tox Study Dur=30 d; Tox Stat Sig=N

bx Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; N=20 males, 20 females per group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=30 d; Tox Study Dur=30 d; Tox Stat Sig=N

by Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=5 males, 5 females per group; Age=6-8 mo; Tox Exp Tech=embedded in muscle; Tox Exp Dur=185 and 365 d; Tox Study Dur=185 and 265 d; Tox Stat Sig=Y; Concentrations of bismuth in kidney and liver, but not gonads, were significantly higher in bismuth dosed birds versus other groups. No differences were observed among doses for accumulation of lead or iron in organs.

bz Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=Y; Sexes were combined for kidney and liver.

ca Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=Y; Sexes were combined for kidney and liver.

cb Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=Y; Sexes were combined for kidney and liver.

cc Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=5 males, 5 females per group; Age=6-8 mo; Tox Exp Tech=embedded in muscle; Tox Exp Dur=185 and 365 d; Tox Study Dur=185 and 265 d; Tox Stat Sig=N

cd Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=Y

ce Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=NR; Pb-treated birds exhibited lack of spermatogenesis.

cf Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=5 males, 5 females per group; Age=6-8 mo; Tox Exp Tech=embedded in muscle; Tox Exp Dur=185 and 365 d; Tox Study Dur=185 and 265 d; Tox Stat Sig=N

cg Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=Y; Effect on kidney weight was observed in males only of Pb group.

ch Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=Y; No effect observed among males.

ci Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=Y

cj Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=5 males, 5 females per group; Age=6-8 mo; Tox Exp Tech=embedded in muscle; Tox Exp Dur=185 and 365 d; Tox Study Dur=185 and 265 d; Tox Stat Sig=N; Organs examined included livers, kidneys and gonads. See paper for accumulation of various elements in organs.

ck Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=N; All Pb-dosed birds died prior to breeding. Two of three birds that developed egg yolk peritonitis were Bi-dosed.

cl Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=Y

cm Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=Y

cn Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=N; Mean age of embryos that died was higher in Bi-dosed birds than in controls or Fe-dosed birds. Pb-dosed birds did not survive to breeding.

co Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=N; No differences among groups were observed in essential element concentrations in duckling tissues or eggs. Pb-dosed birds did not survive to breeding.

cp Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=BISMUTH COMPOUNDS; TOX - Chemical=IRON COMPOUNDS; TOX - Chemical=7439-92-1; N=18 pairs/group (control, Fe, Bi); 6 pairs/Pb group; Age=6-8 mo; Tox Exp Tech=oral gavage; Tox Exp Dur=up to 150 d; Tox Study Dur=150 d; Tox Stat Sig=Y; No duckling weight differences were observed by 7 days post-hatch.

cq Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=10 animals/pen; 3 pens/dose; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

cr Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=10-20/dose; Tox Exp Tech=diet; Tox Exp Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Study Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Stat Sig=Y; concentrations were below detection at other doses

cs Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=10-13/dose; Tox Exp Tech=diet; Tox Exp Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Study Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Stat Sig=Y; concentrations at other doses were not detected.

ct Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=10 animals/pen; 3 pens/dose; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

cu Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=10 animals/pen; 3 pens/dose; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

cv Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=10 animals/pen; 3 pens/dose; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

cw Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=10 animals/pen; 3 pens/dose; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

cx Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=10 animals/pen; 3 pens/dose; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

cy Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=10 animals/pen; 3 pens/dose; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y; see citation for figures of growth rates

cz Hatchling; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=11-23/dose; Tox Exp Tech=diet; Tox Exp Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Study Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Stat Sig=Y

da Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=11-23/dose; Tox Exp Tech=diet; Tox Exp Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Study Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Stat Sig=Y

db Hatchling; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=11-23/dose; Tox Exp Tech=diet; Tox Exp Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Study Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Stat Sig=Y

dc Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=15/dose; Tox Exp Tech=diet; Tox Exp Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Study Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Stat Sig=N

dd Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; N=15/sex/dose; Tox Exp Tech=diet; Tox Exp Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Study Dur=3 wks (pre-breeding) + breeding period to 21 d post-hatch; Tox Stat Sig=Y

de Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; B added to diet did not influence Se accumulation in liver. 60 ppm Se caused slight increase in B accumulation.

df Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; B caused synergistic increase in Se accumulation.

dg Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y; See tables for concentrations in duckling livers. No interactions were observed between B and Se with respect to accumulation in ducklings.

dh Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y; See tables for concentrations in egg yolk and albumen. No interactions were observed between B and Se with respect to accumulation in eggs.

di Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; B did not influence selenium-induced mortality rates.

dj Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; B did not influence Se-induced mortality rates.

dk Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; B and Se in combination resulted in significant interactions.

dl Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y

dm Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y

dn Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; See citation for specific plasma components.

do Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; See citation for specific plasma components. These were not measured in the 60 ppm Se group due to mortality.

dp Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y

dq Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y; Weight loss occurred between treatment onset and pairing.

dr Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y; Data for Se were pooled over 3 levels of B. B and Se were synergistic in female body weight loss; no other interactions were observed.

ds Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; Significant effects of B were observed for body, liver, spleen weights. Significant interactions were observed between B and Se for liver weight changes.

dt Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=4 wks; Tox Stat Sig=Y; B did not influence Se-induced growth changes. These endpoints were not measured in the 60 ppm Se group due to mortality.

du Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y

dv Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y; Data for Se were pooled over 3 levels of B.

dw Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y; No effect observed on liver weight or on other liver biochemistries: glutathione, glutathione peroxidase, GSSG reductase activities, ratio of GSSG to GSH. No interactions observed between B and Se on liver biochemistries.

dx Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y; Significant interactions between B and Se were observed for duckling production

dy Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=N

dz Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y; Data for Se were pooled over 3 levels of B.

ea Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=N; Data for Se were pooled over 3 levels of B.

eb Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=N

ec Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=N; Data for Se were pooled over 3 levels of B.

ed Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10043-35-3; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=14 pairs/treatment; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=prior to and through reproduction (until ducklings were 14 d); Tox Study Dur=prior to and through reproduction (until ducklings were 14 d); Tox Stat Sig=Y

ee Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=15 eggs (20 ppm), 3 eggs (200 ppm); Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 days of treatment; Tox Study Dur=30, 60, or 90 days of treatment; Tox Stat Sig=Y

ef Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=Yes

eg Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=Yes

eh Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=Yes

ei Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=Yes

ej Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=No

ek Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=No

el Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=10 birds; Age=first year; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 d; Tox Study Dur=30, 60, or 90 d; Tox Stat Sig=NR

em Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=5 birds; Age=first year; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 d; Tox Study Dur=30, 60, or 90 d; Tox Stat Sig=Y

en Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=20 pairs/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 days of treatment; Tox Study Dur=30, 60, or 90 days of treatment, 30 d post treatment; Tox Stat Sig=NR; Concentrations decreased significantly by 30 days after treatment cessation. Accumulation was low in blood, brain, muscle, gonads (see table for concentrations).

eo Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=20 pairs/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 days of treatment; Tox Study Dur=30, 60, or 90 days of treatment, 30 d post treatment; Tox Stat Sig=NR; Concentrations decreased significantly by 30 days after treatment cessation.

ep Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=12 birds per timexdose treatment; day old; Tox Exp Tech=diet; Tox Exp Dur=4,8,12 wks; Tox Study Dur=4,8,12 wks; Tox Stat Sig=Y; See citation for Cd concentrations in femurs.

eq Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=20 pairs/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 days of treatment; Tox Study Dur= 30, 60, or 90 days of treatment, 30 d post treatment; Tox Stat Sig=N

er Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=12 birds/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=42 (+/-1) d; Tox Study Dur=42 (+/-1) d; Tox Stat Sig=N

es Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=12 birds/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=42 (+/-1) d; Tox Study Dur=42 (+/-1) d; Tox Stat Sig=Y

et Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=12 birds per timexdose treatment; day old; Tox Exp Tech=diet; Tox Exp Dur=4,8,12 wks; Tox Study Dur=4,8,12 wks; Tox Stat Sig=Y

eu Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=No

ev Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=12 birds/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=42 (+/-1) d; Tox Study Dur=42 (+/-1) d; Tox Stat Sig=Y

ew Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=12 birds per timexdose treatment; day old; Tox Exp Tech=diet; Tox Exp Dur=4,8,12 wks; Tox Study Dur=4,8,12 wks; Tox Stat Sig=Y

ex Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=No

ey Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=No

ez Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=No

fa Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=10 birds; Age=first year; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 d; Tox Study Dur=30, 60, or 90 d; Tox Stat Sig=Y

fb Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=12 birds per timexdose treatment; day old; Tox Exp Tech=diet; Tox Exp Dur=4,8,12 wks; Tox Study Dur=4,8,12 wks; Tox Stat Sig=Y

fc Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=5 birds; Age=first year; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 d; Tox Study Dur=30, 60, or 90 d; Tox Stat Sig=Y

fd Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=12 birds/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=42 (+/-1) d; Tox Study Dur=42 (+/-1) d; Tox Stat Sig=Y

fe Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=No

ff Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=10 kidneys/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 days of treatment; Tox Study Dur=30, 60, or 90 days of treatment; Tox Stat Sig=Y

fg Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=5 testes/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 days of treatment; Tox Study Dur=30, 60, or 90 days of treatment; Tox Stat Sig=Y

fh Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=10 birds; Age=first year; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 d; Tox Study Dur=30, 60, or 90 d; Tox Stat Sig=Y

fi Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=5 birds; Age=first year; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 d; Tox Study Dur=30, 60, or 90 d; Tox Stat Sig=Y

fj Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=12 birds/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=42 (+/-1) d; Tox Study Dur=42 (+/-1) d; Tox Stat Sig=Y

fk Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Dose-Response Data Format=DR Table; N=12 birds per timexdose treatment; day old; Tox Exp Tech=diet; Tox Exp Dur=4,8,12 wks; Tox Study Dur=4,8,12 wks; Tox Stat Sig=N

fl Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=20 pairs/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=30, 60, or 90 days of treatment; Tox Study Dur=30, 60, or 90 days of treatment, 30 d post treatment; Tox Stat Sig=N

fm Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=No

fn Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; N=8; Age=32 weeks; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=42 days; Tox Stat Sig=No

fo Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Chemical=COPPER COMPOUNDS; TOX - Chemical=7758-95-4; TOX - Dose-Response Data Format=DR Table; N=6-8 birds/dose; Age=128 d (at initiation); Tox Exp Tech=diet; Tox Exp Dur=42 +/- 1 d; Tox Study Dur=42 +/- 1 d; Tox Stat Sig=Y; Concentrations not different from controls are not shown. No effects on food consumption, body weight or tissue weights were observed with any treatment.

fp Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Chemical=7758-95-4; TOX - Dose-Response Data Format=DR Table; N=6-8 birds/dose; Age=128 d (at initiation); Tox Exp Tech=diet; Tox Exp Dur=42 +/- 1 d; Tox Study Dur=42 +/- 1 d; Tox Stat Sig=Y; Concentrations not different from controls are not shown. No effects on food consumption, body weight or tissue weights were observed with any treatment.

fq Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Chemical=7758-95-4; TOX - Dose-Response Data Format=DR Table; N=6-8 birds/dose; Age=128 d (at initiation); Tox Exp Tech=diet; Tox Exp Dur=42 +/- 1 d; Tox Study Dur=42 +/- 1 d; Tox Stat Sig=Y; Concentrations not different from controls are not shown. No effects on food consumption, body weight or tissue weights were observed with any treatment. No effects were observed on copper and zinc concentrations in liver.

fr Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Chemical=7758-95-4; TOX - Dose-Response Data Format=DR Table; TOX - Dose-Response Data Format=DR Table; N=6-8 birds/dose; Age=128 d (at initiation); Tox Exp Tech=diet; Tox Exp Dur=42 +/- 1 d; Tox Study Dur=42 +/- 1 d; Tox Stat Sig=Y; Concentrations not different from controls are not shown. No effects on food consumption, body weight or tissue weights were observed with any treatment.

fs Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10108-64-2; TOX - Chemical=7758-95-4; TOX - Chemical=ZINC COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=6-8 birds/dose; Age=128 d (at initiation); Tox Exp Tech=diet; Tox Exp Dur=42 +/- 1 d; Tox Study Dur=42 +/- 1 d; Tox Stat Sig=Y; Concentrations not different from controls are not shown. No effects on food consumption, body weight or tissue weights were observed with any treatment.

ft Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1563-66-2; N=5; Age=36 hr, 7 d, 30 d, or 6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

fu Juvenile; CANADA; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1563-66-2; TOX - Dose-Response Data Format=DR Figure; N=8/group; Tox Exp Tech=pesticide application; subjects walked 50, 150, or 300 m through application areas; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=Y; See citation for figure showing latency to approach versus exposure distance.

fv Juvenile; CANADA; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1563-66-2; TOX - Dose-Response Data Format=DR Table; N=29-38/group; Tox Exp Tech=pesticide application; subjects walked 50, 150, or 300 m through application areas; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

fw Juvenile; CANADA; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1563-66-2; TOX - Dose-Response Data Format=DR Figure; N=8/group; Tox Exp Tech=pesticide application; subjects walked 50, 150, or 300 m through application areas; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR; Plasma cholinesterase was decreased at both application rates, but was not different among exposure distances.

fx Juvenile; CANADA; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1563-66-2; N=8/group; Tox Exp Tech=pesticide application; subjects walked 50, 150, or 300 m through application areas; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

fy Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=107-27-7; N=5/group; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=6 d; Tox Stat Sig=NR; Caused short term (less than 6 d) egg shell thinning.

fz Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; TOX - Dose-Response Data Format=DR Table; N=10/group; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=11 d; Tox Study Dur=16 d; Tox Stat Sig=NR

ga Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; TOX - Dose-Response Data Format=DR Table; N=10/group; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=11 d; Tox Study Dur=16 d; Tox Stat Sig=NR

gb Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; TOX - Dose-Response Data Format=DR Table; N=10/group; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=11 d; Tox Study Dur=16 d; Tox Stat Sig=NR

gc Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; N=5; Age=36 hours; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR; The range is the 95% confidence interval.

gd Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; N=5; Age=7 days; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

ge Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; N=5; Age=30 days; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

gf Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; N=5; Age=6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

gg Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; TOX - Dose-Response Data Format=DR Table; N=10/group; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=11 d; Tox Study Dur=16 d; Tox Stat Sig=NR

gh Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; TOX - Dose-Response Data Format=DR Table; N=10/group; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=11 d; Tox Study Dur=16 d; Tox Stat Sig=NR

gi Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; N=24 pairs/dose; Age=7 and 11 months old; Tox Exp Tech=diet; Tox Exp Dur=19 weeks; Tox Study Dur=19 weeks; Tox Stat Sig=Y; Females had significantly lower brain acetylcholinesterase activity than males. Adult age had no effect.

gj Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; N=24 pairs/dose; Age=7 and 11 months old; Tox Exp Tech=diet; Tox Exp Dur=19 weeks; Tox Study Dur=19 weeks; Tox Stat Sig=Y; Adult age had no effect on toxicity.

gk Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; TOX - Dose-Response Data Format=DR Table; N=10/group; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=11 d; Tox Study Dur=16 d; Tox Stat Sig=NR

gl Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; TOX - Dose-Response Data Format=DR Table; N=10/group; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=11 d; Tox Study Dur=16 d; Tox Stat Sig=NR

gm Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; N=24 pairs/dose; Age=7 and 11 months old; Tox Exp Tech=diet; Tox Exp Dur=19 weeks; Tox Study Dur=19 weeks; Tox Stat Sig=Y; Adult age had no effect on toxicity.

gn Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2921-88-2; N=24 pairs/dose; Age=7 and 11 months old; Tox Exp Tech=diet; Tox Exp Dur=19 weeks; Tox Study Dur=19 weeks; Tox Stat Sig=N; Adult age had no effect on toxicity.

go Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60617-06-3; N=6/dose; Tox Exp Tech=gavage; Tox Exp Dur=28 d; Tox Study Dur=28 d; Tox Stat Sig=NR

gp Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60617-06-3; N=25/dose; Age=4 d; Tox Exp Tech=diet; Tox Exp Dur=9 wks; Tox Study Dur=9 wks; Tox Stat Sig=N

gq Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60617-06-3; N=25/dose; Age=4 d; Tox Exp Tech=diet; Tox Exp Dur=9 wks; Tox Study Dur=9 wks; Tox Stat Sig=N

gr Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60617-06-3; N=6/dose; Tox Exp Tech=gavage; Tox Exp Dur=28 d; Tox Study Dur=28 d; Tox Stat Sig=N

gs Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=28 d; Tox Study Dur=28 d; Tox Stat Sig=NR

gt Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=10/dose; Age=0-6 d post-hatch; Tox Exp Tech=diet; Tox Exp Dur=6 d; Tox Study Dur=6 d; Tox Stat Sig=Y

gu Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=25/dose; Age=4 d; Tox Exp Tech=diet; Tox Exp Dur=9 wks; Tox Study Dur=9 wks; Tox Stat Sig=Y

gv Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=6 d; Tox Study Dur=6 d; Tox Stat Sig=Y; no effect on hepatic NADPH cytochrome C reductase or GSH-S-transferase activity

gw Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=6 adults/dose; 5-20 neonates/dose; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y; see citation for figures of post-natal changes in hepatic microsomal naphthalene metabolism

gx Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=NR; Age=18 wks; Tox Exp Tech=diet; Tox Exp Dur=50 d; Tox Study Dur=50 d; Tox Stat Sig=Y; same effect also seen after 3-9 d exposure period; see citation for figure of temporal changes in hepatic microsomal naphthalene metabolism

gy Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=10/dose; Age=0-8 wks post-hatch; Tox Exp Tech=diet; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y

gz Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=10/dose; Age=0-8 wks post-hatch; Tox Exp Tech=diet; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y

ha Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=10/dose; Age=0-8 wks post-hatch; Tox Exp Tech=diet; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y

hb Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=24/dose; Age=18 wks; Tox Exp Tech=diet; Tox Exp Dur=1 wk; Tox Study Dur=1 wk; Tox Stat Sig=Y; see citation for figure of diurnal variations in plasma corticosterone

hc Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=NR; Age=18 wks; Tox Exp Tech=diet; Tox Exp Dur=3-9 d; Tox Study Dur=3-9 d; Tox Stat Sig=Y

hd Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=NR; Age=18 wks; Tox Exp Tech=diet; Tox Exp Dur=50 d; Tox Study Dur=50 d; Tox Stat Sig=Y

he Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=25/dose; Age=4 d; Tox Exp Tech=diet; Tox Exp Dur=9 wks; Tox Study Dur=9 wks; Tox Stat Sig=Y

hf Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=6 d; Tox Study Dur=6 d; Tox Stat Sig=Y; no effect on plasma thyroxine observed

hg Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=10/dose; Age=0-8 wks post-hatch; Tox Exp Tech=diet; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y

hh Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=10/dose; Age=0-8 wks post-hatch; Tox Exp Tech=diet; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y

hi Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=10-32/dose; Tox Exp Tech=gavage; Tox Exp Dur=28 d; Tox Study Dur=42 d; Tox Stat Sig=Y

hj Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=6 d; Tox Study Dur=6 d; Tox Stat Sig=Y

hk Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=6 d; Tox Study Dur=6 d; Tox Stat Sig=N

hl Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=NR; Age=18 wks; Tox Exp Tech=diet; Tox Exp Dur=50 d; Tox Study Dur=50 d; Tox Stat Sig=Y

hm Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=25/dose; Age=4 d; Tox Exp Tech=diet; Tox Exp Dur=9 wks; Tox Study Dur=9 wks; Tox Stat Sig=N

hn Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=28 d; Tox Study Dur=28 d; Tox Stat Sig=N

ho Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=6 d; Tox Study Dur=6 d; Tox Stat Sig=N

hp Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=NR; Age=18 wks; Tox Exp Tech=diet; Tox Exp Dur=50 d; Tox Study Dur=50 d; Tox Stat Sig=Y

hq Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=50/dose; Age=0-8 wks post-hatch; Tox Exp Tech=diet; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y; see citation for figure of body weight over time; dose estimated at a total of 164 g oil/bird during study

hr Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=3/dose; Tox Exp Tech=waterborne; Tox Exp Dur=1 d; Tox Study Dur=1 d; Tox Stat Sig=Y

hs Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=3 birds/treatment; Tox Exp Tech=in bathing water; Tox Exp Dur=single exposure, 1-4 hrs; Tox Study Dur=2 d; Tox Stat Sig=NR

ht Embryo; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=50/dose; Age=1d of development; Tox Exp Tech=in ovo; Tox Exp Dur=single; Tox Study Dur=18 d of development; Tox Stat Sig=NR

hu Embryo; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=50/dose; Age=1d of development; Tox Exp Tech=in ovo; Tox Exp Dur=single; Tox Study Dur=18 d of development; Tox Stat Sig=NR; see citation for figure of % survival over time

hv Hatchling; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; TOX - Dose-Response Data Format=DR Table; N=65 eggs/group; Age=3 days; Tox Exp Tech=Topical on eggshell; Tox Exp Dur=Single exposure; Tox Study Dur=18 days; Tox Stat Sig=Yes

hw Embryo; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; TOX - Dose-Response Data Format=DR Figure; N=65 eggs/group; Age=3 days; Tox Exp Tech=Topical on eggshell; Tox Exp Dur=Single exposure; Tox Study Dur=18 days; Tox Stat Sig=Yes

hx Hatchling; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; TOX - Dose-Response Data Format=DR Table; N=65 eggs/group; Age=3 days; Tox Exp Tech=Topical on eggshell; Tox Exp Dur=Single exposure; Tox Study Dur=18 days; Tox Stat Sig=Yes

hy Embryo; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; TOX - Dose-Response Data Format=DR Table; N=100 eggs/dose; Age=days 2-18 of incubation; Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=16 d; Tox Stat Sig=Y

hz Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=17 pairs/dose; Age=10 mo; Tox Exp Tech=diet; Tox Exp Dur=96 d; Tox Study Dur=96 d; Tox Stat Sig=N

ia Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=25/dose; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y; see citation for egg composition data

ib Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=17 pairs/dose; Age=10 mo; Tox Exp Tech=diet; Tox Exp Dur=96 d; Tox Study Dur=96 d; Tox Stat Sig=Y

ic Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=20 hens/dose; Tox Exp Tech=diet; Tox Exp Dur=pre-breeding period (19 Feb. - 5 Apr., 1980) + breeding period to hatch; Tox Study Dur=pre-breeding period (19 Feb. - 5 Apr., 1980) + breeding period to hatch

id Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=5-12/dose; Age=10 mo; Tox Exp Tech=diet; Tox Exp Dur=96 d; Tox Study Dur=96 d; Tox Stat Sig=Y

ie Embryo; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; TOX - Dose-Response Data Format=DR Table; N=100 eggs/dose; Age=days 2-16 of incubation; Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=14 d; Tox Stat Sig=Y; No effects observed on liver protein, hematocrit, plasma uric acid, and plasma ALT.

if Hatchling; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; TOX - Dose-Response Data Format=DR Table; N=100 eggs/dose; Age=days 2-16 of incubation; Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=23 d; Tox Stat Sig=Y; No effect observed on liver protein, hematocrit, or plasma alkaline phosphatase.

ig Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=3 pairs/dose; Age=5.5 mo at initiation; Tox Exp Tech=diet; Tox Exp Dur=100 d; Tox Study Dur=100 d; Tox Stat Sig=Y

ih Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=17 pairs/dose; Age=10 mo; Tox Exp Tech=diet; Tox Exp Dur=96 d; Tox Study Dur=96 d; Tox Stat Sig=Y

ii Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; N=20 hens/dose; Tox Exp Tech=diet; Tox Exp Dur=pre-breeding period (19 Feb. - 5 Apr., 1980) + breeding period to hatch; Tox Study Dur=pre-breeding period (19 Feb. - 5 Apr., 1980) + breeding period to hatch

ij Embryo; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; TOX - Dose-Response Data Format=DR Table; N=100 eggs/dose; Age=days 2-18 of incubation; Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=16 d; Tox Stat Sig=Y; see citation for chemical composition of waste crankcase oil

ik Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=CRUDE OILS; TOX - Chemical=FUEL OILS; N=9/dose; Tox Exp Tech=gavage; Tox Exp Dur=28 d; Tox Study Dur=28 d; Tox Stat Sig=N

il Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=57-12-5; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=5/treatment; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=2 hr; Tox Stat Sig=N

im Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=57-12-5; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=5/treatment; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=2 hr; Tox Stat Sig=Y

in Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=57-12-5; TOX - Dose-Response Data Format=DR Table; N=at least 5 determinations/group; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=2 hr; Tox Stat Sig=Y

io Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=57-12-5; TOX - Dose-Response Data Format=DR Table; TOX - Dose-Response Data Format=DR Table; N=5/treatment; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=Y; These are primary enzymes for detoxification of cyanide in tissues.

ip Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=57-12-5; TOX - Dose-Response Data Format=DR Table; N=5/treatment; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=N

iq Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=57-12-5; TOX - Dose-Response Data Format=DR Table; N=at least 5 determinations/group; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=Y

ir Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-67-74; TOX - Dose-Response Data Format=DR Table; N=10; Age=1 week; laboratory; Tox Exp Tech=gavage; Tox Exp Dur=90 days; Tox Study Dur=90 days; Tox Stat Sig=yes; Times of death are reported in Table 1.

is Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-67-74; TOX - Dose-Response Data Format=DR Table; N=10; Age=1 week; laboratory; Tox Exp Tech=gavage; Tox Exp Dur=90 days; Tox Study Dur=90 days; Tox Stat Sig=yes; Multiple foci of swollen axons were observed throughout white and grey matter.

it Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-67-74; TOX - Dose-Response Data Format=DR Figure; N=10; Age=1 week; laboratory; Tox Exp Tech=gavage; Tox Exp Dur=90 days; Tox Study Dur=90 days; Tox Stat Sig=yes; Decreased weight gain occurred in all groups.

iu Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-67-74; TOX - Dose-Response Data Format=DR Table; N=10; Age=1 week; laboratory; Tox Exp Tech=gavage; Tox Exp Dur=90 days; Tox Study Dur=90 days; Tox Stat Sig=yes; Times of onset for neurotoxicity are reported in Table 1.

iv Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=12; Tox Exp Tech=diet; Tox Exp Dur=8-94 d; Tox Study Dur=8 -94 d; Tox Stat Sig=NR

iw Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=10/group; Tox Exp Tech=diet; Tox Exp Dur=approx. 2 mos.; Tox Study Dur=approx. 2 mos.; Tox Stat Sig=NR; See table for residues in lead + DDE, and mercury + DDE groups.

ix Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=4; Age=3-5 mo; Tox Exp Tech=diet; Tox Exp Dur=7 d; Tox Study Dur=15 d; Tox Stat Sig=NR; white peking ducks

iy Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=NR; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=45 d; Tox Study Dur=45 d; Tox Stat Sig=NR; Indian Runner ducks

iz Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=8 eggs/dose; Age=10 mo; Tox Exp Tech=diet; Tox Exp Dur=3-6 mo; Tox Study Dur=3-6 mo; Tox Stat Sig=N

ja Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=7-9; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=45 d; Tox Study Dur=45 d; Tox Stat Sig=NR; Swedish and Rouen ducks

jb Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=5-10/dose; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=NR

jc Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=10/dose; Tox Exp Tech=diet; Tox Exp Dur=50 - 52 d; Tox Study Dur=50 - 52 d; Tox Stat Sig=NR

jd Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=5-10/dose; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=N

je Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=4-5; Age=3-5 mo; Tox Exp Tech=diet; Tox Exp Dur=7 d; Tox Study Dur=26 d; Tox Stat Sig=N; white peking ducks

jf NR; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=12/dose; Tox Exp Tech=diet; Tox Exp Dur=1-9 d; Tox Study Dur=1-9 d; Tox Stat Sig=Y; chemical reported as DDE, isomer not specified

jg Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=6 hens; 45 total eggs; Tox Exp Tech=Diet; Tox Exp Dur=3 weeks; Tox Study Dur=3 weeks; Tox Stat Sig=No; Pheasants and Ring Doves were also examined

jh Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=6 hens; 45 total eggs; Tox Exp Tech=Diet; Tox Exp Dur=3 weeks; Tox Study Dur=3 weeks; Tox Stat Sig=Yes

ji Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=5-11; Age=3-5 mo; Tox Exp Tech=diet; Tox Exp Dur=7 d; Tox Study Dur=15 d; Tox Stat Sig=N; white peking ducks

jj Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=NR; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=45 d; Tox Study Dur=45 d; Tox Stat Sig=NR; Indian Runner ducks

jk Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=5-10/dose; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=N

jl Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=4; Age=3-5 mo; Tox Exp Tech=diet; Tox Exp Dur=7 d; Tox Study Dur=7d; Tox Stat Sig=NR; white peking ducks

jm Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=4 adults/dose; 141-175 offspring/dose; Age=10 mo; Tox Exp Tech=diet; Tox Exp Dur=3-6 mo; Tox Study Dur=3-6 mo; Tox Stat Sig=N

jn Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=4 adults/dose; 64-71 offspring/dose; Age=10 mo; Tox Exp Tech=diet; Tox Exp Dur=3-6 mo; Tox Study Dur=3-6 mo; Tox Stat Sig=Y

jo Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=4 adults/dose; 148-156 offspring/dose; Age=10 mo; Tox Exp Tech=diet; Tox Exp Dur=3-6 mo; Tox Study Dur=3-6 mo; Tox Stat Sig=Y

jp Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=492-518, 232-384, and 128-276 for the 0, 10, and 40 ppm DDE groups; Tox Exp Tech=Diet; Tox Exp Dur=2 years; Tox Study Dur=2 years; Tox Stat Sig=Yes

jq Hatchling; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=666-696, 620-664, and 317-602 for the 0, 10, and 40 ppm DDE groups; Tox Exp Tech=Diet; Tox Exp Dur=2 years; Tox Study Dur=2 years; Tox Stat Sig=Yes

jr Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=NR; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=45 d; Tox Study Dur=45 d; Tox Stat Sig=Y; Swedish and Rouen ducks

js Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=NR; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=45 d; Tox Study Dur=45 d; Tox Stat Sig=Y; Swedish and Rouen ducks

jt Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=5/dose; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=45 d; Tox Study Dur=45 d; Tox Stat Sig=Y; Indian Runner ducks

ju Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=5-10/dose; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=N

jv Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=21-25/dose; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y; see citation for egg composition data

jw Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=9-20/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=45 d; Tox Study Dur=45 d; Tox Stat Sig=Y; Indian Runner ducks

jx Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=18; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=45 d; Tox Study Dur=45 d; Tox Stat Sig=Y; Swedish and Rouen ducks

jy Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=6 hens; 45 total eggs; Tox Exp Tech=Diet; Tox Exp Dur=3 weeks; Tox Study Dur=3 weeks; Tox Stat Sig=Yes

jz Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=20-28, 21-25, and 10-23 for the 0, 10, and 40 ppm DDE groups; Tox Exp Tech=Diet; Tox Exp Dur=2 years; Tox Study Dur=2 years; Tox Stat Sig=Yes

ka Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; TOX - Dose-Response Data Format=DR Table; N=5-10/dose; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=Y

kb Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=10 hens /dose; 8 eggs/dose; Tox Exp Tech=diet; Tox Exp Dur=50 - 52 d; Tox Study Dur=50 - 52 d; Tox Stat Sig=Y

kc Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=20 hens/dose; Tox Exp Tech=diet; Tox Exp Dur=pre-breeding period (19 Feb. - 5 Apr., 1980) + breeding period to hatch; Tox Study Dur=pre-breeding period (19 Feb. - 5 Apr., 1980) + breeding period to hatch

kd Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; TOX - Dose-Response Data Format=DR Figure; N=5/group; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=NR; See figures for eggshell thickness over time after dosing. No effects were observed with dieldrin, chlordecone, parathion, carbaryl, or tetraethyllead.

ke Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=63; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=N; see citation for regressions for shell strength and weight

kf Hatchling; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; N=274-327, 69-167, and 26-113 for the 0, 10, and 40 ppm DDE groups; Tox Exp Tech=Diet; Tox Exp Dur=2 years; Tox Study Dur=2 years; Tox Stat Sig=Yes

kg Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; TOX - Chemical=50-29-3; N=20/dose; Tox Exp Tech=diet; Tox Exp Dur=30 d; Tox Study Dur=30 d; Tox Stat Sig=Y; sulfonated derivatives of DDT and DDE also tested

kh Adult; IN; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; TOX - Chemical=60-57-1; TOX - Chemical=27304-13-8; TOX - Chemical=1336-36-3; N=5 birds/timepoint (timepoints = 0,10,20,32,42,52,59,70,80,90,100 days); July-October; Bloomington; Tox Exp Tech=habitat contamination; Tox Exp Dur=up to 100 d; Tox Study Dur=up to 100 d; Tox Stat Sig=Y; See paper for data on specific PCB congener analysis.

ki Adult; IN; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; TOX - Chemical=60-57-1; TOX - Chemical=27304-13-8; TOX - Chemical=1336-36-3; N=5 birds/timepoint (timepoints = 0,10,20,32,42,52,59,70,80,90,100 days); July-October; Bloomington; Tox Exp Tech=habitat contamination; Tox Exp Dur=up to 100 d; Tox Study Dur=up to 100 d; Tox Stat Sig=Y; See paper for data on specific PCB congener analysis.

kj Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; TOX - Chemical=LEAD COMPOUNDS; TOX - Chemical=MERCURY COMPOUNDS; N=10/group; Tox Exp Tech=diet; Tox Exp Dur=55 d - approx. 2 mos; Tox Study Dur=55 d - approx. 2 mos; Tox Stat Sig=Y

kk Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; TOX - Chemical=LEAD COMPOUNDS; TOX - Chemical=MERCURY COMPOUNDS; N=10/group; Tox Exp Tech=diet; Tox Exp Dur=55 d - approx. 2 mos; Tox Study Dur=55 d - approx. 2 mos; Tox Stat Sig=Y; Effects observed were not greater than those seen with DDE alone.

kl Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; TOX - Chemical=115-09-3; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=10/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=N; Hg concentration in muscle was not influenced by added DDE.

km Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-55-9; TOX - Chemical=115-09-3; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=10/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=N; Hg concentration in eggs was not influenced by added DDE.

kn Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=NR; eggs average 30.2% dry matter and 43.4% lipid on a dry matter basis

ko Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; TOX - Dose-Response Data Format=DR Table; N=10/dose; Age=7 d; Tox Exp Tech=diet; Tox Exp Dur=5 d; Tox Study Dur=8 d; Tox Stat Sig=NR

kp Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; TOX - Dose-Response Data Format=DR Table; N=10/dose; Age=7 d; Tox Exp Tech=diet; Tox Exp Dur=5 d; Tox Study Dur=8 d; Tox Stat Sig=NR

kq Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=N

kr Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=4/dose/sampling time; Age=80 d at initiation; Tox Exp Tech=diet; Tox Exp Dur=58 d; Tox Study Dur=58 d; Tox Stat Sig=N; mean body weight range = 903-947 g; food consumption rate = 60 g/duck/d

ks Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; TOX - Dose-Response Data Format=DR Table; N=10/dose; Age=7 d; Tox Exp Tech=diet; Tox Exp Dur=5 d; Tox Study Dur=8 d; Tox Stat Sig=NR

kt Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=5 hens; 19 eggs; Tox Exp Tech=Diet; Tox Exp Dur=6 months; Tox Study Dur=7 months; Tox Stat Sig=N

ku Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=5 hens; 19 eggs; Tox Exp Tech=Diet; Tox Exp Dur=6 months; Tox Study Dur=7 months; Tox Stat Sig=No

kv Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=5 hens; 19 eggs; Tox Exp Tech=Diet; Tox Exp Dur=6 months; Tox Study Dur=7 months; Tox Stat Sig=Y; R-value = weight/length x width

kw Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=5 hens; 19 eggs; Tox Exp Tech=Diet; Tox Exp Dur=6 months; Tox Study Dur=7 months; Tox Stat Sig=Y

kx Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; TOX - Dose-Response Data Format=DR Table; N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=Y

ky Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=3/dose; Tox Exp Tech=diet; Tox Exp Dur=7 wks; Tox Study Dur=7 wks; Tox Stat Sig=Y; see citation for description of histological changes in shell gland

kz Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=5 hens/dose; 19 eggs/dose; Tox Exp Tech=diet; Tox Exp Dur=6 mo; Tox Study Dur=6 mo; Tox Stat Sig=Y; exact form of DDT not specified

la Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=5 hens; 19 eggs; Tox Exp Tech=Diet; Tox Exp Dur=6 months; Tox Study Dur=7 months; Tox Stat Sig=Y

lb Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=4/dose/sampling time; Age=80 d at initiation; Tox Exp Tech=diet; Tox Exp Dur=58 d; Tox Study Dur=58 d; Tox Stat Sig=Y

lc Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=5 hens; 19 eggs; Tox Exp Tech=Diet; Tox Exp Dur=6 months; Tox Study Dur=7 months; Tox Stat Sig=N

ld Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=50-29-3; N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=N

le Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=DDT (Technical Grade Mixture); N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=NR; eggs average 30.2% dry matter and 43.4% lipid on a dry matter basis

lf NR; OH; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=DDT (Technical Grade Mixture); N=1-6/sample; Sandusky Bay, Port Clinton; Tox Exp Tech=field application; Tox Exp Dur=0-413 d; Tox Study Dur=9 - 130 d; Tox Stat Sig=NR

lg NR; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=DDT (Technical Grade Mixture); N=4/dose; Tox Exp Tech=diet; Tox Exp Dur=30 d; Tox Study Dur=30 d; Tox Stat Sig=NR; mallards and pintails tested

lh Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=DDT (Technical Grade Mixture); TOX - Dose-Response Data Format=DR Table; N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=Y

li Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=DDT (Technical Grade Mixture); N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=N

lj Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=DDT (Technical Grade Mixture); TOX - Dose-Response Data Format=DR Table; N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=Y

lk Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=DDT (Technical Grade Mixture); N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=N

ll Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=8065-48-3; N=5; Age=36 hr, 7 d, 30 d, or 6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

lm Juvenile; NJ; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=333-41-5; N=5 ducks; Condition=dead; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y; Birds were found dead in the field and studied post-mortem in the laboratory.

ln Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=333-41-5; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 3 or 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

lo Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=333-41-5; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 3 or 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

lp Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=333-41-5; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

lq Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=333-41-5; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 3 or 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

lr Embryo; Hatchling; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=333-41-5; TOX - Chemical=121-75-5; TOX - Chemical=56-38-2; TOX - Dose-Response Data Format=DR Table; N=12/group; Age=Day 3 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=to hatch; Tox Stat Sig=Y; See table for brain and plasma cholinesterase values and specific age effects.

ls Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=94-75-7; N=5/group; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=6 d; Tox Stat Sig=NR; Caused short term (less than 6 d) egg shell thinning.

lt Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-32-2; N=4-8/dose; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=NR

lu Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-32-2; N=4-8/dose; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=N

lv Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-32-2; N=4-8/dose; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=N

lw Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-32-2; N=4-8/dose; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=N

lx Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-32-2; TOX - Dose-Response Data Format=DR Table; N=4-8/dose; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=Y

ly Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-32-2; N=4-8/dose; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=Y

lz Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-32-2; N=100; Tox Exp Tech=diet; Tox Exp Dur=42 d; Tox Study Dur=42 d; Tox Stat Sig=Y; see citation for regressions for shell strength and weight

ma Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=141-66-2; N=4-5/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

mb Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=141-66-2; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=8-10/dose; Age=5 days; Tox Exp Tech=diet; Tox Exp Dur=5 days; Tox Study Dur=8 days; Tox Stat Sig=Y; See citation for probit regression slope and replicate data.

mc Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=141-66-2; TOX - Dose-Response Data Format=DR Table; N=8-10/dose; Age=10 days; Tox Exp Tech=diet; Tox Exp Dur=5 days; Tox Study Dur=8 days; Tox Stat Sig=Y; See citation for probit regression slope and replicate data.

md Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=141-66-2; N=5; Age=36 hr, 7 d, 30 d, or 6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

me Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=141-66-2; TOX - Dose-Response Data Format=DR Table; N=8-10/dose; Age=5 days; Tox Exp Tech=diet; Tox Exp Dur=5 days; Tox Study Dur=8 days; Tox Stat Sig=Y; Other doses not tested for diet consumption.

mf Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=141-66-2; N=4-5/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

mg Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=141-66-2; TOX - Dose-Response Data Format=DR Table; N=36/dose; Age=14 d; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=1-17 days post-dose; Tox Stat Sig=NR; See citation for estimated times to recovery of brain cholinesterase after dosing.

mh Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=141-66-2; N=4/group; Age=1 day old; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=NR; Plasma cholinesterase inhibition was about 95%.

mi Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=141-66-2; TOX - Chemical=55-38-9; N=4/group; Age=1 day old; Tox Exp Tech=diet; Tox Exp Dur=13 d; Tox Study Dur=13 d; Tox Stat Sig=NR; See citation figure for plasma cholinesterase data.

mj Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; TOX - Dose-Response Data Format=DR Table; N=4-6 per group; Age=75 days; Tox Exp Tech=Diet; Tox Exp Dur=Second - generation. Exposed 75 days after hatch.; Tox Study Dur=2 generation study.; Tox Stat Sig=NR

mk Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=NR; eggs average 30.2% dry matter and 43.4% lipid on a dry matter basis

ml Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=10/dose; Age=1 - 25 d; Tox Exp Tech=diet; Tox Exp Dur=24 d; Tox Study Dur=24 d; Tox Stat Sig=NR

mm Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=6; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=8 d; Tox Study Dur=8 d; Tox Stat Sig=NR; see citation for figures of changes in tissue concentrations over time

mn Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=6; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=8 d; Tox Study Dur=8 d; Tox Stat Sig=NR; see citation for figures of changes in tissue concentrations over time

mo Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=6; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=8 d; Tox Study Dur=8 d; Tox Stat Sig=NR; see citation for figures of changes in tissue concentrations over time

mp Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=8-16/dose; Age=1 d at initiation; Tox Exp Tech=waterborne; Tox Exp Dur=8-34 d; Tox Study Dur=10-34 d; Tox Stat Sig=NR; see citation for figure of tissue dieldrin concentration over time

mq Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=8-16/dose; Age=1 d at initiation; Tox Exp Tech=waterborne; Tox Exp Dur=8-34 d; Tox Study Dur=10-34 d; Tox Stat Sig=NR; see citation for figure of tissue dieldrin concentration over time

mr Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=8-16/dose; Age=1 d at initiation; Tox Exp Tech=waterborne; Tox Exp Dur=8-34 d; Tox Study Dur=10-34 d; Tox Stat Sig=NR; see citation for figure of tissue dieldrin concentration over time

ms Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=8-16/dose; Age=1 d at initiation; Tox Exp Tech=waterborne; Tox Exp Dur=8-34 d; Tox Study Dur=10-34 d; Tox Stat Sig=NR; see citation for figure of tissue dieldrin concentration over time

mt Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=12/dose; Age=1 d at initiation; Tox Exp Tech=waterborne; Tox Exp Dur=34 d; Tox Study Dur=34 d; Tox Stat Sig=NR

mu Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=10/dose; Age=1 - 25 d; Tox Exp Tech=diet; Tox Exp Dur=24 d; Tox Study Dur=24 d; Tox Stat Sig=NR; tissue dieldrin concentrations at 24d LC50 (29.5 ug/g diet): lipid, 395; skin, 193; liver, 12 ug/g.

mv Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=8-10/dose; Age=5 days; Tox Exp Tech=diet; Tox Exp Dur=5 days; Tox Study Dur=8 days; Tox Stat Sig=Y; See citation for probit regression slope and replicate data.

mw Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; TOX - Dose-Response Data Format=DR Table; N=8-10/dose; Age=5 days; Tox Exp Tech=diet; Tox Exp Dur=5 days; Tox Study Dur=8 days; Tox Stat Sig=Y; See citation for probit regression slope and replicate data.

mx Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=10/dose; Age=1 - 25 d; Tox Exp Tech=diet; Tox Exp Dur=24 d; Tox Study Dur=24 d; Tox Stat Sig=NR; tissue dieldrin concentrations at 96hr LC50 (165 ug/g diet): lipid, 915; skin, 305; liver, 52 ug/g.

my Both Adult and Juv.; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; TOX - Dose-Response Data Format=DR Table; N=30 per group; Tox Exp Tech=Diet; Tox Exp Dur=Second - generation. Exposed 75 days after hatch.; Tox Study Dur=2 generation study.; Tox Stat Sig=Yes; Drake encounters were measured as number of matched dominance behaviors in a 5-minute interval.

mz Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=N

na Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; TOX - Dose-Response Data Format=DR Table; N=5-15 per group; Age=75 days; Tox Exp Tech=Diet; Tox Exp Dur=Second - generation. Exposed 75 days after hatch.; Tox Study Dur=2 generation study.; Tox Stat Sig=Yes

nb Both Adult and Juv.; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; TOX - Dose-Response Data Format=DR Table; N=5-15 per group; Age=75 days; Tox Exp Tech=Diet; Tox Exp Dur=Second - generation. Exposed 75 days after hatch.; Tox Study Dur=2 generation study.; Tox Stat Sig=Yes

nc Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; TOX - Dose-Response Data Format=DR Table; N=5-15 per group; Age=75 days; Tox Exp Tech=Diet; Tox Exp Dur=Second - generation. Exposed 75 days after hatch.; Tox Study Dur=2 generation study.; Tox Stat Sig=Yes

nd Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; TOX - Dose-Response Data Format=DR Table; N=3-6 per group; Age=75 days; Tox Exp Tech=Diet; Tox Exp Dur=Second - generation. Exposed 75 days after hatch.; Tox Study Dur=2 generation study.; Tox Stat Sig=Yes

ne Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; TOX - Dose-Response Data Format=DR Table; N=9-25 per group; Age=75 days; Tox Exp Tech=Diet; Tox Exp Dur=Second - generation. Exposed 75 days after hatch.; Tox Study Dur=2 generation study.; Tox Stat Sig=Yes

nf Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; TOX - Dose-Response Data Format=DR Table; N=9-25 per group; Age=75 days; Tox Exp Tech=Diet; Tox Exp Dur=Second - generation. Exposed 75 days after hatch.; Tox Study Dur=2 generation study.; Tox Stat Sig=No

ng Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=10/dose; Age=1 - 25 d; Tox Exp Tech=diet; Tox Exp Dur=24 d; Tox Study Dur=24 d; Tox Stat Sig=NR; tissue dieldrin concentrations at 24-d LOAEL(16 ug/g diet): lipid, 180; skin, 102; liver, 7 ug/g.

nh Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=10/dose; Age=1 - 25 d; Tox Exp Tech=diet; Tox Exp Dur=24 d; Tox Study Dur=24 d; Tox Stat Sig=NR; tissue dieldrin concentrations at 24d NOAEL (0.3 ug/g diet): lipid, 4; skin, 2; liver, <1 ug/g.

ni Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=4/dose/sampling time; Age=90 d at initiation; Tox Exp Tech=diet; Tox Exp Dur=58 d; Tox Study Dur=58 d; Tox Stat Sig=N; mean body weight range = 847-891 g; food consumption rate = 60 g/duck/d

nj Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=12/dose; Age=1 d at initiation; Tox Exp Tech=waterborne; Tox Exp Dur=34 d; Tox Study Dur=34 d; Tox Stat Sig=N

nk Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=5 trios (2F, 1M adults)/dose; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=N

nl Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=4-6/dose; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=8 d; Tox Study Dur=8 d; Tox Stat Sig=N

nm Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=5 trios (2F, 1M)/dose; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=N

nn Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; TOX - Dose-Response Data Format=DR Table; N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=Y

no Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=4/dose/sampling time; Age=90 d at initiation; Tox Exp Tech=diet; Tox Exp Dur=58 d; Tox Study Dur=58 d; Tox Stat Sig=Y

np Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=5 trios (2F, 1M)/dose; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y

nq Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=60-57-1; N=18/dose; Tox Exp Tech=diet; Tox Exp Dur=343 d; Tox Study Dur=343 d; Tox Stat Sig=N

nr Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1445-75-6; N=12; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=60 min; Tox Stat Sig=Y

ns Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=137512-74-4; N=16 pairs/group; Age=22 weeks; Tox Exp Tech=diet; Tox Exp Dur=20 weeks; Tox Study Dur=20 weeks; Tox Stat Sig=N

nt Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=137512-74-4; TOX - Dose-Response Data Format=DR Table; N=10/dose; Age=19 weeks; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=14 d; Tox Stat Sig=Y; Acute toxicity signs included lethargy, ruffled appearance, loss of righting reflex.

nu Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=137512-74-4; TOX - Dose-Response Data Format=DR Table; N=10/dose; Age=10 days; Tox Exp Tech=diet; Tox Exp Dur=5 d; Tox Study Dur=12 d; Tox Stat Sig=Y

nv Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=137512-74-4; N=16 pairs/group; Age=22 weeks; Tox Exp Tech=diet; Tox Exp Dur=20 weeks; Tox Study Dur=20 weeks; Tox Stat Sig=N

nw Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=137512-74-4; N=16 pairs/group; Age=22 weeks; Tox Exp Tech=diet; Tox Exp Dur=20 weeks; Tox Study Dur=20 weeks; Tox Stat Sig=N; High dose birds only were examined.

nx Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=137512-74-4; N=16 pairs/group; Age=22 weeks; Tox Exp Tech=diet; Tox Exp Dur=20 weeks; Tox Study Dur=20 weeks; Tox Stat Sig=N

ny Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=137512-74-4; TOX - Dose-Response Data Format=DR Table; N=10/dose; Age=10 days; Tox Exp Tech=diet; Tox Exp Dur=5 d; Tox Study Dur=12 d; Tox Stat Sig=Y

nz Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=137512-74-4; TOX - Dose-Response Data Format=DR Table; N=10/dose; Age=19 weeks; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=14 d; Tox Stat Sig=Y

oa Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=137512-74-4; N=16 pairs/group; Age=22 weeks; Tox Exp Tech=diet; Tox Exp Dur=20 weeks; Tox Study Dur=20 weeks; Tox Stat Sig=N

ob Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-29-7; N=5; Age=36 hours; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

oc Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-29-7; N=5; Age=7 days; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

od Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-29-7; N=5; Age=30 days; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

oe Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-29-7; N=5; Age=6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

of Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-20-8; N=2-5/sample; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=13 d; Tox Study Dur=13 d exposure + 64 d depuration; Tox Stat Sig=NR; body weight = 960-1360 g

og NR; WA; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-20-8; N=7-10 animals; Wenatchee; Tox Exp Tech=pesticide application (late fall); Tox Exp Dur=NR; Tox Study Dur=approx. 10 mo.; Tox Stat Sig=NR; Samples were taken from apparently healthy individuals, collected in orchards.

oh Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=72-20-8; N=5; Age=36 hr, 7 d, 30 d, or 6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

oi Hatchling; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=12/group; Age=72 hr of incubation (time of treatment); Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=to hatch; Tox Stat Sig=Y

oj Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=10/group; Age=72 hr of incubation (time of treatment); Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=7 or 14 d; Tox Stat Sig=Y

ok Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=6/group; Age=20 wks; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y

ol Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=6/group; Age=20 wks; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y

om Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=6/group; Age=20 wks; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y

on Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=10/group; Age=72 hr of incubation (time of treatment); Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=7 or 14 d; Tox Stat Sig=Y

oo Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=10/group; Age=72 hr of incubation (time of treatment); Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=7 or 14 d; Tox Stat Sig=Y

op Hatchling; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=12/group; Age=72 hr of incubation (time of treatment); Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=to hatch; Tox Stat Sig=Y

oq Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=6/group; Age=20 wks; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y; No treatment effects were observed on other blood chemistries (except plasma cholinesterase), hematocrit, or hemoglobin.

or Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=12/group; Age=72 hr of incubation (time of treatment); Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=14 d; Tox Stat Sig=Y

os Hatchling; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=12/group; Age=72 hr of incubation (time of treatment); Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=to hatch; Tox Stat Sig=Y; No effects were observed on alkaline phosphatase, aspartate aminotransferase, or hematocrit

ot Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=6/group; Age=20 wks; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y

ou Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=2104-64-5; TOX - Dose-Response Data Format=DR Table; N=12/group; Age=72 hr of incubation (time of treatment); Tox Exp Tech=application to egg surface; Tox Exp Dur=single; Tox Study Dur=14 d; Tox Stat Sig=Y

ov Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-90-2; N=5; Age=36 hr, 7 d, 30 d, or 6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

ow Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-90-2; TOX - Dose-Response Data Format=DR Table; N=36/dose; Age=14 d; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=1-17 days post-dose; Tox Stat Sig=NR; See citation for estimated times to recovery of brain cholinesterase after dosing.

ox Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=55-38-9; N=4-5/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

oy Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=55-38-9; N=6/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR; See citation for figure showing regression of tadpole versus water pesticide concentrations.

oz Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=55-38-9; N=4-5/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

pa Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=55-38-9; N=4/group; Age=1 day old; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=NR; Plasma cholinesterase inhibition was about 95%.

pb Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=944-22-9; TOX - Dose-Response Data Format=DR Table; N=36/dose; Age=14 d; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=1-17 days post-dose; Tox Stat Sig=NR; See citation for estimated times to recovery of brain cholinesterase after dosing.

pc Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=FUEL OILS; N=4-5/dose; Tox Exp Tech=gavage; Tox Exp Dur=28 d; Tox Study Dur=28 d; Tox Stat Sig=Y

pd Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=FUEL OILS; N=9-32/dose; Tox Exp Tech=gavage; Tox Exp Dur=28 d; Tox Study Dur=42 d; Tox Stat Sig=Y

pe Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=FUEL OILS; N=4-5/dose; Tox Exp Tech=gavage; Tox Exp Dur=28 d; Tox Study Dur=28 d; Tox Stat Sig=N

pf Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=FUEL OILS; N=50/dose; Age=8d of incubation; Tox Exp Tech=in ovo; Tox Exp Dur=single; Tox Study Dur=6 d; Tox Stat Sig=Y

pg Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=FUEL OILS; TOX - Dose-Response Data Format=DR Table; N=30 eggs/group; Age=3 or 8 days of incubation (time of treatment); Tox Exp Tech=egg immersion; Tox Exp Dur=single 30 second exposure; Tox Study Dur=18 d; Tox Stat Sig=Y; No effects observed on embryo size or incidence of abnormal survivors.

ph Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=FUEL OILS; TOX - Dose-Response Data Format=DR Table; N=30 eggs/group; Age=3 or 8 days of incubation (time of treatment); Tox Exp Tech=topical application; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y; Percent of normal/abnormal survivors not assessed in 5 ul/egg group due to high mortality.

pi Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=FUEL OILS; TOX - Dose-Response Data Format=DR Table; N=30 eggs/group; Age=3 or 8 days of incubation (time of treatment); Tox Exp Tech=topical application; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y; Embryonic weight and length not assessed in 5 ul/egg group due to high mortality.

pj Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=FUEL OILS; N=50/dose; Age=8d of incubation; Tox Exp Tech=in ovo; Tox Exp Dur=single; Tox Study Dur=until hatch or 30 d incubation period; Tox Stat Sig=Y

pk NR; ND; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1071-83-6; TOX - Dose-Response Data Format=DR Table; N=3-6 sample wetlands/treatment; June; near Lakota (48deg03'N, 98deg21'W); Tox Exp Tech=spray application to habitat; Tox Exp Dur=2 yrs; Tox Stat Sig=Y; Number of birds was positively correlated with hectares of open water and percent coverage of open water, and negatively correlated with percent coverage of live vegetation.

pl Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=76-44-8; N=5/group; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=6 d; Tox Stat Sig=NR; Caused short term (less than 6 d) egg shell thinning.

pm Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-89-6; TOX - Chemical=7439-92-1; N=2/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=2 mos; Tox Stat Sig=Y; See citation for specific enzymes measured.

pn Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-89-6; TOX - Chemical=7439-92-1; N=8/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=14 d; Tox Stat Sig=Y; See citation for other enzymes measured. Lead dosed ducks also exhibited anemia, atrophied pectoral muscles, and bile stains in the gizzard.

po Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-89-6; TOX - Chemical=7439-92-1; N=8/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=14 d; Tox Stat Sig=Y

pp Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-89-6; TOX - Chemical=7439-92-1; N=8/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=14 d; Tox Stat Sig=Y

pq Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=20 per sex; Age=8 months; laboratory; Tox Exp Tech=gavage; Tox Exp Dur=single exposure; Tox Study Dur=4 months; Tox Stat Sig=yes

pr Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=4/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=7-22 d; Tox Stat Sig=Y; See citation for figure showing blood lead over time. Mean mass of one #four lead shot = 0.2 g.

ps Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=2 F, 4 M; treatment=6 M-F pairs/group; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=Y

pt Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=2 F, 4 M; treatment=6 M-F pairs/group; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=Y

pu Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=2 F, 4 M; treatment=6 M-F pairs/group; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=Y

pv Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=2 F, 4 M; treatment=6 M-F pairs/group; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=Y

pw Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=2 F, 4 M; treatment=6 M-F pairs/group; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=Y

px Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=2 F, 4 M; treatment=6 M-F pairs/group; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=Y

py Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=2 F, 4 M; treatment=6 M-F pairs/group; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=Y

pz Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=2 F, 4 M; treatment=6 M-F pairs/group; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=Y

qa Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=5/dose; Age=1 d; Tox Exp Tech=oral; Tox Exp Dur=single; Tox Study Dur=96 hr; Tox Stat Sig=NR; dietary vitamin E did not affect lead deposition

qb Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=10 eggs; treatment=20 eggs; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=Y

qc Both Adult and Juv.; Sacramento; CA; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Dose-Response Data Format=DR Table; N=50 birds/treatment; Sacramento National Wildlife Refuge; Willows, CA (39deg29'N, 122deg20'W); Tox Exp Tech=habitat contamination; Tox Exp Dur=4 mos; Tox Study Dur=4 mos/yr; Tox Stat Sig=Y; Elevated levels (greater than or equal to 0.2 ppm) in blood were observed in birds from all enclosures. No sex specific differences in Pb exposure rate were observed.

qd Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=11 birds; Age=1 yr; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=14 d; Tox Stat Sig=Y; Males had significantly higher liver concentrations than females, while females had significantly higher femur concentrations.

qe Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=5 birds; Age=1 yr; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=14 d; Tox Stat Sig=Y; Males had significantly higher liver concentrations than females, while females had significantly higher femur concentrations.

qf Adult; Sacramento; CA; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=31 birds; Age=1 yr; Sacramento National Wildlife Refuge; Tox Exp Tech=ingestion; Tox Exp Dur=80 d; Tox Study Dur=14 d; Tox Stat Sig=NR; Males had significantly lower concentrations in femur than females.

qg Adult; Sacramento; CA; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=24 birds; Age=1 yr; Sacramento National Wildlife Refuge; Tox Exp Tech=ingestion; Tox Exp Dur=80 d; Tox Study Dur=14 d; Tox Stat Sig=NR; Males had significantly lower concentrations in femur than females.

qh Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=20 females, 10 males/group; Tox Exp Tech=Gavage; Tox Exp Dur=Single dose (one shot); repeated dose (two shot); Tox Study Dur=4 weeks (1 shot); 8 weeks (two shot); Tox Stat Sig=Yes; Highest Pb concentrations were found in femur (vs. other bones). Females accumulated greater amounts than males. Short light cycle decreased the Pb accumulation in both wingbone and femur.

qi NR; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Dose-Response Data Format=DR Table; N=5-6/group; Tox Exp Tech=Gavage; Tox Exp Dur=Single dose, except for repeated dose group; Tox Study Dur=5 weeks; Tox Stat Sig=NR; See Table 2 for association of lead concentrations with symptoms and mortality.

qj Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=treatment = 10/group
control = 5; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=9 wks; Tox Stat Sig=NR; No mortality was observed in ducks fed commercial feed.

qk Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=10/treatment group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=49 d; Tox Stat Sig=Y; Mortality was observed in wild caught mallards only, and not in game farm birds. Birds were dosed 14 days after receiving an initial dose of 1 # four lead shot.

ql Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=4/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=7-22 d; Tox Stat Sig=NR; Birds that died exhibited clinical lead poisoning signs.

qm Adult; Sacramento; Lab; CA; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=12 (control); 16 (lab); 63 (field); Age=1 yr; Sacramento National Wildlife Refuge; Tox Exp Tech=oral intubation (lab exposure)
ingestion (field exposure); Tox Exp Dur=single (lab exposure)
80 d (field exposure); Tox Study Dur=14 d; Tox Stat Sig=NR

qn NR; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Dose-Response Data Format=DR Table; N=5-6/group; Tox Exp Tech=Gavage; Tox Exp Dur=Single dose, except for repeated dose group; Tox Study Dur=5 weeks; Tox Stat Sig=Yes

qo Both Adult and Juv.; Sacramento; CA; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Dose-Response Data Format=DR Table; N=50 birds/treatment; Sacramento National Wildlife Refuge; Willows, CA (39deg29'N, 122deg20'W); Tox Exp Tech=habitat contamination; Tox Exp Dur=4 mos; Tox Study Dur=4 mos/yr; Tox Stat Sig=Y; In P8, mortality due to lead poisoning was signficantly higher during fall than spring. No sex differences were observed in mortality in any enclosure.

qp Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=4/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=7-22 d; Tox Stat Sig=Y

qq Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=8; Age=6 months; Laboratory; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=3 weeks; Tox Stat Sig=Yes; See Figure 1. ALAD activity was inhibited through day 21.

qr Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=20 per sex; Age=8 months; laboratory; Tox Exp Tech=gavage; Tox Exp Dur=single exposure; Tox Study Dur=4 months; Tox Stat Sig=yes; A linear regression between blood lead and blood ALAD activity is shown in Figure 1.

qs Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=treatment = 10/group
control = 5; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=9 wks; Tox Stat Sig=NR

qt Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=8; Age=6 months; Laboratory; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=3 weeks; Tox Stat Sig=Yes; See Figure 1 for the time-relationship. The peak protoporphyrin concentration occurred on day 14, then started to decline.

qu NR; ITALY; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Dose-Response Data Format=DR Figure; N=21 birds; fall; World Wildlife Fund Refuge, Tuscany; Tox Exp Tech=site contamination (primary uptake via ingestion); Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR

qv Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=20/treatment group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=49 d; Tox Stat Sig=Y; EPP concentrations increaed steadily in wild birds.

qw Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=treatment = 10/group
control = 5; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=9 wks; Tox Stat Sig=Y; See figures for these parameter values over time.

qx Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=8; Age=6 months; Laboratory; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=3 weeks; Tox Stat Sig=Yes; The data are not shown, but significance at the $p < 0.01$ level is reported.

qy Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=2 F, 4 M; treatment=6 M-F pairs/group; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=N

qz Adult; Sacramento; Lab; CA; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=16 (2 #four shot)
63 (field exposure); Age=1 yr; Sacramento National Wildlife Refuge; Tox Exp Tech=oral intubation (2 #four shot)
ingestion (field exposure); Tox Exp Dur=single (shot)
80 d (field exposure); Tox Study Dur=14 d; Tox Stat Sig=Y; No effect observed in females.

ra Adult; Sacramento; Lab; CA; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=12 (control); 16 (lab); 63 (field); Age=1 yr; Sacramento National Wildlife Refuge; Tox Exp Tech=oral intubation (lab exposure)
ingestion (field exposure); Tox Exp Dur=single (lab exposure)
80 d (field exposure); Tox Study Dur=14 d; Tox Stat Sig=NR; No effect observed in females.

rb Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=20/treatment group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=49 d; Tox Stat Sig=Y; Both wild and captive mallards were used. See figure for changes in body weight and ALAD over time.

rc Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=2 F, 4 M; treatment=6 M-F pairs/group; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=N

rd Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=20/treatment group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=49 d; Tox Stat Sig=Y

re Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=20 females, 10 males/group; Tox Exp Tech=Gavage; Tox Exp Dur=Single dose (one shot); repeated dose (two shot); Tox Study Dur=4 weeks (1 shot); 8 weeks (two shot); Tox Stat Sig=No

rf Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=4/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=7-22 d; Tox Stat Sig=N

rg NR; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Dose-Response Data Format=DR Figure; N=5-6/group; Tox Exp Tech=Gavage; Tox Exp Dur=Single dose, except for repeated dose group; Tox Study Dur=5 weeks; Tox Stat Sig=Yes

rh Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=treatment = 10/group
control = 5; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=9 wks; Tox Stat Sig=NR; Most severe signs were observed in groups fed Ca-supplemented corn and corn only. See citation for histopathological descriptions.

ri Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=20 females/group; Tox Exp Tech=Gavage; Tox Exp Dur=Single dose (one shot); repeated dose (two shot); Tox Study Dur=4 weeks (1 shot); 8 weeks (two shot); Tox Stat Sig=Yes

rj Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; N=control=2 F, 4 M; treatment=6 M-F pairs/group; Age=6 mos; Tox Exp Tech=intubation; Tox Exp Dur=single; Tox Study Dur=5 wks; Tox Stat Sig=Y; See figure for regression of egg number and bone lead concentration.

rk Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=TUNGSTEN COMPOUNDS; N=16/treatment; Age=6 mo; Tox Exp Tech=oral; Tox Exp Dur=single exposure; 30 d observation; Tox Study Dur=30 d; Tox Stat Sig=Y

rl Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=TUNGSTEN COMPOUNDS; N=16/treatment; Age=6 mo; Tox Exp Tech=oral; Tox Exp Dur=single exposure; 30 d observation; Tox Study Dur=30 d; Tox Stat Sig=Y

rm Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=TUNGSTEN COMPOUNDS; N=16/treatment; Age=6 mo; Tox Exp Tech=oral; Tox Exp Dur=single exposure; 30 d observation; Tox Study Dur=30 d; Tox Stat Sig=Y; Tungsten-iron-dosed birds accumulated higher concentrations of tungsten than tungsten-polymer-dosed birds.

rn Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=TUNGSTEN COMPOUNDS; N=16/treatment; Age=6 mo; Tox Exp Tech=oral; Tox Exp Dur=single exposure; 30 d observation; Tox Study Dur=30 d; Tox Stat Sig=Y; Fifty percent of ducks dosed with lead shot died.

ro Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=TUNGSTEN COMPOUNDS; N=16/treatment; Age=6 mo; Tox Exp Tech=oral; Tox Exp Dur=single exposure; 30 d observation; Tox Study Dur=30 d; Tox Stat Sig=Y; Hematocrit and hemoglobin values decreased over time for all groups except for lead shot group. ALAD activity was lower in lead dosed ducks compared with steel dosed ducks.

rp Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=TUNGSTEN COMPOUNDS; N=16/treatment; Age=6 mo; Tox Exp Tech=oral; Tox Exp Dur=single exposure; 30 d observation; Tox Study Dur=30 d; Tox Stat Sig=Y

rq Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=TUNGSTEN COMPOUNDS; N=16/treatment; Age=6 mo; Tox Exp Tech=oral; Tox Exp Dur=single exposure; 30 d observation; Tox Study Dur=30 d; Tox Stat Sig=Y

rr Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=TUNGSTEN COMPOUNDS; N=16/treatment; Age=6 mo; Tox Exp Tech=oral; Tox Exp Dur=single exposure; 30 d observation; Tox Study Dur=30 d; Tox Stat Sig=Y; Relative heart and liver weights were higher than in tungsten-polymer, and steel, tungsten-polymer, and tungsten-iron groups, respectively.

rs Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=TUNGSTEN COMPOUNDS; N=16/treatment; Age=6 mo; Tox Exp Tech=oral; Tox Exp Dur=single exposure; 30 d observation; Tox Study Dur=30 d; Tox Stat Sig=Y

rt Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=TUNGSTEN COMPOUNDS; N=16/treatment; Age=6 mo; Tox Exp Tech=oral; Tox Exp Dur=single exposure; 30 d observation; Tox Study Dur=30 d; Tox Stat Sig=Y; Lead dose survivors lost 10% of their pre-dosing weights.

ru Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7439-92-1; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=TUNGSTEN COMPOUNDS; N=16/treatment; Age=6 mo; Tox Exp Tech=oral; Tox Exp Dur=single exposure; 30 d observation; Tox Study Dur=30 d; Tox Stat Sig=NR; Only lead-dosed ducks exhibited clinical signs.

rv Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=301-04-2; N=30; Tox Exp Tech=Diet; Tox Exp Dur=15 weeks; Tox Study Dur=15 weeks; Tox Stat Sig=NR

rw Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=301-04-2; N=10; Tox Exp Tech=Diet; Tox Exp Dur=15 weeks; Tox Study Dur=15 weeks; Tox Stat Sig=Yes

rx Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=301-04-2; N=10 (controls); 30 (treated); Tox Exp Tech=Diet; Tox Exp Dur=15 weeks; Tox Study Dur=15 weeks; Tox Stat Sig=NR

ry Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=301-04-2; N=10; Tox Exp Tech=Diet; Tox Exp Dur=15 weeks; Tox Study Dur=15 weeks; Tox Stat Sig=Yes

rz Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=301-04-2; N=10; Tox Exp Tech=Diet; Tox Exp Dur=15 weeks; Tox Study Dur=15 weeks; Tox Stat Sig=Yes; Red-winged blackbirds, brown-headed cowbirds, common grackles, northern bobwhites, and eastern screech owls were also studied.

sa Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=301-04-2; N=10; Tox Exp Tech=Diet; Tox Exp Dur=15 weeks; Tox Study Dur=15 weeks; Tox Stat Sig=Yes

sb NR; ITALY; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; N=39 birds; Ebro Delta Natural Park; Tox Exp Tech=site contamination; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR; Approximately 25% of captured wild ducks had ingested lead shot. Critical concentration in kidney for diagnosing lead exposure was 3.0 ppm, wet wt

sc NR; ITALY; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; N=6-10 birds/tissue type; Ebro Delta Natural Park; Tox Exp Tech=site contamination; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR

sd NR; ITALY; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; N=39 birds; Ebro Delta Natural Park; Tox Exp Tech=site contamination; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR; Approximately 25% of captured wild ducks had ingested lead shot. Critical concentration in liver for diagnosing lead exposure was 1.5 ppm, wet wt.

se Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; N=10/group; Tox Exp Tech=diet; Tox Exp Dur=approx. 2 mos; Tox Study Dur=approx. 2 mos; Tox Stat Sig=NR

sf Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 5/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y; No correlation was observed between lead in blood and in liver.

sg Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 5/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

sh Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=5/ Pb treatment;3/control treatments; Age=approx. 7 mo; Tox Exp Tech=diet; Tox Exp Dur=15 wks; Tox Study Dur=15 wks; Tox Stat Sig=Y; Liver Pb concentrations were higher in corn diet group than complete diet group. No correlation was observed between lead concentrations in blood and liver.

si Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 20/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y; A strong correlation was observed between lead in blood and in liver (see figure). See tables for residues in kidney and feces, and for zinc residue data.

sj NR; ID; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Figure; N=521 fecal analyses at 11 wetlands (at least 20 per wetland); Coeur d'Alene and St. Joe River Basins; Tox Exp Tech=contaminated sediment ingestion; Tox Exp Dur=NR; Tox Study Dur=2 yr; Tox Stat Sig=Y; Data were pooled for tundra swans, mallards, and Canada geese.

sk Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=5/ Pb treatment;3/control treatments; Age=approx. 7 mo; Tox Exp Tech=diet; Tox Exp Dur=15 wks; Tox Study Dur=15 wks; Tox Stat Sig=NR; No clinical lead poisoning signs observed.

sl Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 20/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

sm Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 5/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

sn Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=5/ Pb treatment;3/control treatments; Age=approx. 7 mo; Tox Exp Tech=diet; Tox Exp Dur=15 wks; Tox Study Dur=15 wks; Tox Stat Sig=Y

so Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 5/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

sp Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 20/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y; No effects on hematocrit were observed.

sq Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=5/ Pb treatment;3/control treatments; Age=approx. 7 mo; Tox Exp Tech=diet; Tox Exp Dur=15 wks; Tox Study Dur=15 wks; Tox Stat Sig=Y; No differences were observed between treatment and control birds on complete diets.

sr Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 20/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=NR

ss Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Figure; N=10/ Pb treatment; 20/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

st Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 5/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

su Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=5/ Pb treatment;3/control treatments; Age=approx. 7 mo; Tox Exp Tech=diet; Tox Exp Dur=15 wks; Tox Study Dur=15 wks; Tox Stat Sig=Y

sv Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=5/ Pb treatment;3/control treatments; Age=approx. 7 mo; Tox Exp Tech=diet; Tox Exp Dur=15 wks; Tox Study Dur=15 wks; Tox Stat Sig=NR

sw Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 5/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=Y

sx Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Figure; N=5/ Pb treatment;3/control treatments; Age=approx. 7 mo; Tox Exp Tech=diet; Tox Exp Dur=15 wks; Tox Study Dur=15 wks; Tox Stat Sig=Y; No differences were observed between treatment and control birds on complete diets.

sy Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 20/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=N

sz Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 5/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=N

ta Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=LEAD COMPOUNDS; TOX - Dose-Response Data Format=DR Table; N=10/ Pb treatment; 20/control treatment; Age=approx. 5 mo; Tox Exp Tech=diet; Tox Exp Dur=10 wks; Tox Study Dur=10 wks; Tox Stat Sig=NR

tb Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10099-74-8; TOX - Dose-Response Data Format=DR Table; N=20/dose; 5/dose x time group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=3, 6, 9, or 12 wks; Tox Study Dur=3, 6, 9, or 12 wks; Tox Stat Sig=Y

tc Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10099-74-8; TOX - Dose-Response Data Format=DR Table; N=20/dose; 5/dose x time group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=3, 6, 9, or 12 wks; Tox Study Dur=3, 6, 9, or 12 wks; Tox Stat Sig=Y; See citation for lead concentrations in blood after 3, 6, 9 weeks of treatment.

td Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10099-74-8; TOX - Dose-Response Data Format=DR Table; N=26-28/group; Age=9 d; Tox Exp Tech=diet; Tox Exp Dur=3 or 8 d; Tox Study Dur=3 or 8 d; Tox Stat Sig=N; Scores tended to be lower in 500 ppm groups than controls, but differences were not significant.

te Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10099-74-8; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=20/dose; 5/dose x time group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=3, 6, 9, or 12 wks; Tox Study Dur=3, 6, 9, or 12 wks; Tox Stat Sig=Y

tf Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10099-74-8; TOX - Dose-Response Data Format=DR Table; N=20/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=3, 6, 9, or 12 wks; Tox Study Dur=3, 6, 9, or 12 wks; Tox Stat Sig=Y

tg Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10099-74-8; TOX - Dose-Response Data Format=DR Table; N=30 eggs/group; Age=3 or 8 days of incubation (time of treatment); Tox Exp Tech=egg immersion in solution; Tox Exp Dur=single 30 second exposure; Tox Study Dur=18 d; Tox Stat Sig=Y; No effect on survival was observed.

th Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10099-74-8; TOX - Dose-Response Data Format=DR Table; N=26-28/group; Age=9 d; Tox Exp Tech=diet; Tox Exp Dur=3 or 8 d; Tox Study Dur=3 or 8 d; Tox Stat Sig=Y

ti Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=21609-90-5; N=3-5/group; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=3 wks; Tox Study Dur=85-89 d; Tox Stat Sig=NR; Two birds also developed paralysis.

tj Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=21609-90-5; TOX - Dose-Response Data Format=DR Table; N=6/group; Age=20 wks; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y

tk Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=21609-90-5; TOX - Dose-Response Data Format=DR Table; N=6/group; Age=20 wks; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y; No treatment effects were observed on other blood chemistries (except plasma cholinesterase), hematocrit, or hemoglobin.

tl Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=21609-90-5; TOX - Dose-Response Data Format=DR Table; N=6/group; Age=20 wks; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y

tm Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=21609-90-5; N=3-5/group; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=3 wks; Tox Study Dur=85-89 d; Tox Stat Sig=NR

tn Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=21609-90-5; TOX - Dose-Response Data Format=DR Table; N=6/group; Age=20 wks; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y

to Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=21609-90-5; TOX - Dose-Response Data Format=DR Table; N=6/group; Age=20 wks; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y

tp Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=21609-90-5; N=3-5/group; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=3 wks; Tox Study Dur=85-89 d; Tox Stat Sig=NR

tq Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=58-89-9; N=5/dose; Condition=laying; Tox Exp Tech=gavage; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=NR

tr Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=58-89-9; N=5/dose; Condition=laying; Tox Exp Tech=gavage; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=NR

ts Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=58-89-9; N=5/dose; Condition=laying; Tox Exp Tech=gavage; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=NR

tt Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=58-89-9; N=30/dose; Age=3 or 8d of development; Tox Exp Tech=in ovo, immersion; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=NR; malformations in surviors noted

tu Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=58-89-9; N=30/dose; Age=3 or 8d of development; Tox Exp Tech=in ovo, external application; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=NR; malformations in survivors noted

tv Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=58-89-9; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=N

tw Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=58-89-9; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y

tx Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=58-89-9; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y

ty Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=58-89-9; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=8 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y

tz Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=121-75-5; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 3 or 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

ua Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=121-75-5; TOX - Dose-Response Data Format=DR Table; N=36/dose; Age=14 d; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=1-17 days post-dose; Tox Stat Sig=NR

ub Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=121-75-5; N=4-5/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

uc Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=121-75-5; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 3 or 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

ud Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=121-75-5; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 3 or 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

ue Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=121-75-5; N=4-5/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

uf Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=121-75-5; TOX - Dose-Response Data Format=DR Table; N=36/dose; Age=14 d; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=1-17 days post-dose; Tox Stat Sig=NR; See citation for estimated times to recovery of brain cholinesterase after dosing.

ug Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=121-75-5; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

uh Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=121-75-5; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 3 or 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

ui Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=MERCURY COMPOUNDS; N=10/group; Tox Exp Tech=diet; Tox Exp Dur=55 d; Tox Study Dur=55 d; Tox Stat Sig=NR; See table for residues in DDE + mercury group.

uj Embryo; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Dose-Response Data Format=DR Table; N=80 eggs/group; Age=incubation day 3; Tox Exp Tech=application to shell surface; Tox Exp Dur=single; Tox Study Dur=15 d; Tox Stat Sig=Y

uk Embryo; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Dose-Response Data Format=DR Table; N=80 eggs/group; Age=incubation day 3; Tox Exp Tech=application to shell surface; Tox Exp Dur=single; Tox Study Dur=15 d; Tox Stat Sig=Y

ul Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Dose-Response Data Format=DR Table; N=30 eggs/group; Age=3 or 8 days of incubation (time of treatment); Tox Exp Tech=egg immersion in solution; Tox Exp Dur=single 30 second exposure; Tox Study Dur=18 d; Tox Stat Sig=Y

um Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Dose-Response Data Format=DR Table; N=30 eggs/group; Age=3 or 8 days of incubation (time of treatment); Tox Exp Tech=egg immersion in solution; Tox Exp Dur=single 30 second exposure; Tox Study Dur=18 d; Tox Stat Sig=Y

un Embryo; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=80 eggs/group; Age=incubation day 3; Tox Exp Tech=application to shell surface; Tox Exp Dur=single; Tox Study Dur=15 d; Tox Stat Sig=Y; See figure for percent survival over time.

uo Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Dose-Response Data Format=DR Table; N=29 pairs; Tox Exp Tech=oral (capsule); Tox Exp Dur=2 doses @ 2 wk interval (eggs collected beginning after 1st dose); Tox Study Dur=6 yr (4 generations); Tox Stat Sig=Y; Mercury increased embryo mortality late in incubation; post hatch mortality occurred mostly within 4 days of hatch.

up Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/treatment; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

uq Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/treatment; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

ur Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/group; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y; Birds on the Se+Hg diet laid eggs and had livers with significantly higher Se concentrations than birds fed Se only.

us Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/group; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

ut Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/treatment; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

uu Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/treatment; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

uv Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/treatment; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

uw Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/treatment; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

ux Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/treatment; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

uy Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/treatment; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

uz Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/treatment; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

va Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/treatment; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

vb Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/group; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=N

vc Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/group; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=NR; One bird was found dead in this group.

vd Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/group; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y; Incidence of deformities was highest in Hg + Se group. See paper for types of deformities observed among treatment groups.

ve Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/group; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=Y

vf Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/group; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=N

vg Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=115-09-3; TOX - Chemical=1464-42-2; N=12/group; Age=18 mo; Tox Exp Tech=diet; Tox Exp Dur=April 1-June 16; Tox Study Dur=April 1-June 16; Tox Stat Sig=N

vh Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; N=3-5 birds/group; Tox Exp Tech=diet; Tox Exp Dur=2 wks; Tox Study Dur=1,4,8,12,16 wks post-treatment

vi Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; N=3-14 birds/tissue x generation group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=3 generations; Tox Stat Sig=Y; Liver Hg residues were significantly lower in females than in males. See citation for residues from all three generations. Findings from 1st and 2nd generations were previously published.

vj Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; N=3-5 birds/group; Tox Exp Tech=diet; Tox Exp Dur=2 wks; Tox Study Dur=1,4,8,12,16 wks post-treatment

vk Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; TOX - Dose-Response Data Format=DR Figure; N=10 females, 3 males/dose; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=12 mos; Tox Stat Sig=NR

vl Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; N=6-9 (9 breeding pairs/dose); Tox Exp Tech=diet; Tox Exp Dur=22 Dec. to 27 July, 1976; approx. 7 mo; Tox Study Dur=approx. 7 mo; Tox Stat Sig=NR; see citation for figures relating tissue concentrations to blood concentrations

vm Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; TOX - Dose-Response Data Format=DR Table; N=249 (control); 276 (0.5 ppm); 108 (3 ppm); Tox Exp Tech=parental diet (in ovo); Tox Exp Dur=incubation period; Tox Study Dur=2-8 days of age; Tox Stat Sig=Y; See paper for specific behavioral components that were measured.

vn Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; TOX - Dose-Response Data Format=DR Table; N=319 (control); 339 (0.5 ppm); 158 (3 ppm); Tox Exp Tech=parental diet (in ovo); Tox Exp Dur=incubation period; Tox Study Dur=2-8 days of age; Tox Stat Sig=Y; See paper for specific behavioral components that were measured.

vo Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; N=14 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=3 generations; Tox Stat Sig=Y; Findings from 1st and 2nd generations were previously published.

vp Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; N=14 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=3 generations; Tox Stat Sig=N; No adult subjects died or were sick during the studies. Findings from 1st and 2nd generations were previously published.

vq Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; N=14 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=3 generations; Tox Stat Sig=N; Findings from 1st and 2nd generations were previously published.

vr Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; TOX - Dose-Response Data Format=DR Table; N=3-11 ducklings/group; Tox Exp Tech=parental diet; Tox Exp Dur=3-15 mos; Tox Study Dur=2 yr; Tox Stat Sig=NR

vs Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; N=14 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=3 generations; Tox Stat Sig=N; No effects were observed on open field activity of ducklings. Findings from 1st and 2nd generations were previously published.

vt Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; TOX - Dose-Response Data Format=DR Figure; N=10 females, 3 males/dose; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=12 mos; Tox Stat Sig=NR

vu Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; N=14 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=3 generations; Tox Stat Sig=Y; Findings from 1st and 2nd generations were previously published.

vv Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; TOX - Dose-Response Data Format=DR Figure; N=10 females, 3 males/dose; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=12 mos; Tox Stat Sig=NR

vw Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; TOX - Dose-Response Data Format=DR Table; N=NR; Tox Exp Tech=parental diet; Tox Exp Dur=3-15 mos; Tox Study Dur=2 yr; Tox Stat Sig=NR; Mortality occurred mostly 3-6 days post-hatch, whether treatment diet had been consumed or not.

vx Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; N=14 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=3 generations; Tox Stat Sig=N; Findings from 1st and 2nd generations were previously published.

vy Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=502-39-6; TOX - Dose-Response Data Format=DR Figure; N=10 females, 3 males/dose; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=12 mos; Tox Stat Sig=NR

vz Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=298-00-0; N=12 pairs/group; Age=7 mo; Tox Exp Tech=diet; Tox Exp Dur=8 d; Tox Study Dur=until ducklings were 5 d old; Tox Stat Sig=NR

wa Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=298-00-0; N=12 pairs/group; Age=7 mo; Tox Exp Tech=diet; Tox Exp Dur=8 d; Tox Study Dur=until ducklings were 5 d old; Tox Stat Sig=Y

wb Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=298-00-0; N=12 pairs/group; Age=7 mo; Tox Exp Tech=diet; Tox Exp Dur=8 d; Tox Study Dur=until ducklings were 5 d old; Tox Stat Sig=NR

wc Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=298-00-0; N=12 pairs /group; Age=7 mo; Tox Exp Tech=diet; Tox Exp Dur=8 d; Tox Study Dur=until ducklings were 5 d old; Tox Stat Sig=Y

wd Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=298-00-0; N=12 pairs/group; Age=7 mo; Tox Exp Tech=diet; Tox Exp Dur=8 d; Tox Study Dur=until ducklings were 5 d old; Tox Stat Sig=N

we Hatchling; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=298-00-0; N=12 pairs/group; Age=7 mo; Tox Exp Tech=diet; Tox Exp Dur=8 d; Tox Study Dur=until ducklings were 5 d old; Tox Stat Sig=N

wf NR; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=315-18-4; N=12; Age=3 - 5 mo; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=14 d; Tox Stat Sig=NR

wg Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=315-18-4; N=5; Age=36 hr, 7 d, 30 d, or 6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

wh Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=6923-22-4; N=5; Age=36 hr, 7 d, 30 d, or 6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

wi Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=71-36-3; TOX - Dose-Response Data Format=DR Table; N=30 eggs/group; Age=3 or 8 days of incubation (time of treatment); Tox Exp Tech=egg immersion; Tox Exp Dur=single 30 second exposure; Tox Study Dur=18 d; Tox Stat Sig=Y; Embryo size and incidence of abnormalities not assessed due to high mortality.

wj Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; TOX - Dose-Response Data Format=DR Table; N=6 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y

wk Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; TOX - Dose-Response Data Format=DR Table; N=6 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y; Concentrations were significantly higher than in controls. See citation for accumulation of Ni at other doses.

wl Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; TOX - Dose-Response Data Format=DR Table; N=36 birds/dose; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=30, 60, 90 d of age; Tox Study Dur=30, 60, 90 d of age; Tox Stat Sig=NR; Lower concentrations were found in survivors (non-detectable to 11.6 ppm, wet wt). See table for Ni concentrations in liver and kidney for all dose-time combinations.

wm Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; TOX - Dose-Response Data Format=DR Table; N=36 birds/dose; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=30, 60, 90 d of age; Tox Study Dur=30, 60, 90 d of age; Tox Stat Sig=NR; Signs appeared earlier at 1200 ppm than at 800 ppm. Males may have been more sensitive than females.

wn Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; N=6 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y; No difference between 200 and 800 ppm groups observed.

wo Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; N=6 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=N

wp Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; TOX - Dose-Response Data Format=DR Table; N=36 birds/dose; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=30, 60, 90 d of age; Tox Study Dur=30, 60, 90 d of age; Tox Stat Sig=N

wq Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; TOX - Dose-Response Data Format=DR Table; N=36 birds/dose; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=30, 60, 90 d of age; Tox Study Dur=30, 60, 90 d of age; Tox Stat Sig=Y

wr Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; N=6 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=N; No nickel-related lesions were observed in any tissues.

ws Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; TOX - Dose-Response Data Format=DR Table; N=36 birds/dose; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=30, 60, 90 d of age; Tox Study Dur=30, 60, 90 d of age; Tox Stat Sig=N

wt Juvenile; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; TOX - Dose-Response Data Format=DR Table; N=36 birds/dose; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=30, 60, 90 d of age; Tox Study Dur=30, 60, 90 d of age; Tox Stat Sig=Y; This effect was not observed by 90 days of age.

wu Juvenile; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; TOX - Dose-Response Data Format=DR Table; N=36 birds/dose; Age=14 d; Tox Exp Tech=diet; Tox Exp Dur=30, 60, 90 d of age; Tox Study Dur=30, 60, 90 d of age; Tox Stat Sig=Y; This effect was not observed by 90 days of age.

wv Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7786-81-4; TOX - Dose-Response Data Format=DR Table; N=6 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=N

ww Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1910-42-5; N=30/dose; Age=3 or 8d of development; Tox Exp Tech=in ovo, immersion; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=NR; malformations in surviors noted

wx Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1910-42-5; N=30/dose; Age=3 or 8d of development; Tox Exp Tech= in ovo, external application; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=NR; malformations in survivors noted

wy Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; TOX - Dose-Response Data Format=DR Table; N=36/dose; Age=14 d; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=1-17 days post-dose; Tox Stat Sig=NR

wz Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=4-5/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

xa Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=6/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR; See citation for figure showing regression of tadpole versus water pesticide concentrations.

xb Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 3 or 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

xc Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 3 or 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

xd Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=5; Age=36 hours; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

xe Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=5; Age=7 days; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

xf Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=5; Age=30 days; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

xg Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=5; Age=6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

xh Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=4-5/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

xi Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; TOX - Dose-Response Data Format=DR Figure; N=6/dose; Age=2 weeks old; Tox Exp Tech=diet; Tox Exp Dur=single; Tox Study Dur=NR; Tox Stat Sig=NR

xj Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; TOX - Dose-Response Data Format=DR Table; N=36/dose; Age=14 d; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=1-17 days post-dose; Tox Stat Sig=NR; See citation for estimated times to recovery of brain cholinesterase after dosing.

xk Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; TOX - Dose-Response Data Format=DR Table; N=30/group; Age=Day 3 or 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

xl Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=30/group; Age=Day 3 or 8 of incubation; Tox Exp Tech=application to eggshell surface; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=Y

xm Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=5 trios (2F, 1M adults)/dose; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=N

xn Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=5 trios (2F, 1M)/dose; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=N

xo Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=5 trios (2F, 1M)/dose; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=Y; eggshell thinning was not associated with reduced hatchability

xp Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=56-38-2; N=5 trios (2F, 1M)/dose; Tox Exp Tech=diet; Tox Exp Dur=90 d; Tox Study Dur=90 d; Tox Stat Sig=N

xq Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=87-86-5; N=4-6; Age=4 d; Tox Exp Tech=diet; Tox Exp Dur=11 d; Tox Study Dur=11 d; Tox Stat Sig=NR

xr Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=87-86-5; N=6-8; Age=4 d; Tox Exp Tech=diet; Tox Exp Dur=11 d; Tox Study Dur=11 d; Tox Stat Sig=NR

xs Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=87-86-5; TOX - Dose-Response Data Format=DR Table; N=6/dose; Age=4 d; Tox Exp Tech=diet; Tox Exp Dur=11 d; Tox Study Dur=11 d; Tox Stat Sig=Y; see citation for food ingestion rates

xt Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=87-86-5; TOX - Dose-Response Data Format=DR Table; N=6/dose; Age=4 d; Tox Exp Tech=diet; Tox Exp Dur=11 d; Tox Study Dur=11 d; Tox Stat Sig=N; see citation for ingestion rates

xu Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; TOX - Dose-Response Data Format=DR Figure; N=4-5 birds/dose; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=Y

xv Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; N=5 males, 5 females/dose; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Stat Sig=NR

xw Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; TOX - Dose-Response Data Format=DR Figure; N=6 birds/dose; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=Y; See text for mortality dose response data.

xx Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; TOX - Dose-Response Data Format=DR Figure; N=4-5 birds/dose; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=Y; See text for mortality dose response data.

xy Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; TOX - Dose-Response Data Format=DR Figure; N=4-5 birds/dose; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=Y; See text for mortality dose response data.

xz Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; N=5 males, 5 females/dose; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Stat Sig=NR

ya Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; N=5 males, 5 females/dose; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Stat Sig=NR

yb Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; N=5 males, 5 females/dose; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Stat Sig=NR

yc Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; N=4-5 birds/dose; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=Y; This parameter was not significantly different from controls at doses of 6.2-8.0 mg/kg bw. See paper for data on incidence of liver foci, necrosis, petechia, congested duodena.

yd Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; N=4-5 birds/dose; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=Y; See paper for specific descriptions of lesions.

ye Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; N=4-5 birds/dose; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=Y

yf Adult; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; N=4-5 birds/dose; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=24 hr; Tox Stat Sig=Y

yg Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; N=5 males, 5 females/dose; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Stat Sig=NR

yh Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=7723-14-0; N=5 males, 5 females/dose; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Stat Sig=NR

yi Both Adult and Juv.; Embryo; Species - California (R)=Phalacrocorax auritus; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1336-36-3; N=NR; Tox Exp Tech=NR; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR

yj Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=POLYCYCLIC AROMATIC HYDROCARBONS (PAHs); TOX - Dose-Response Data Format=DR Table; N=22/dose; Age=5 d of incubation; Tox Exp Tech=in ovo; Tox Exp Dur=single; Tox Study Dur=24 d of incubation; Tox Stat Sig=Y

yk Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=114-26-1; N=5; Age=36 hr, 7 d, 30 d, or 6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

yl NR; ID; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=RADIONUCLIDES; N=4-6/sample; Idaho National Engineering Lab; Tox Exp Tech=site contamination; Tox Exp Dur=75 - 145 d; Tox Study Dur=field exposure period + 51 d depuration in lab; Tox Stat Sig=NR; see citation for tables of residue data for muscle, liver, feather and gut tissues

ym Adult; ID; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=RADIONUCLIDES; N=7-15; leaching ponds, Test Reactor Area, Idaho National Engineering Laboratory; Tox Exp Tech=site contamination; Tox Exp Dur=43-145 d; Tox Study Dur=43 - 145 d; uncontaminated ducks were released to leaching ponds containing radionuclide contamination for 43-145d

yn Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SALINE WATER; TOX - Dose-Response Data Format=DR Table; N=10 birds/group; Age=2 d; Tox Exp Tech=drinking water; Tox Exp Dur=14 d; Tox Study Dur=14 d; Tox Stat Sig=Y

yo Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SALINE WATER; TOX - Dose-Response Data Format=DR Table; N=10 birds/group; Age=2 d; Tox Exp Tech=drinking water; Tox Exp Dur=14 d; Tox Study Dur=14 d; Tox Stat Sig=Y

yp Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SALINE WATER; TOX - Dose-Response Data Format=DR Table; N=10 birds/group; Age=2 d; Tox Exp Tech=drinking water; Tox Exp Dur=28 d; Tox Study Dur=28 d; Tox Stat Sig=Y; See also effects on feather growth. No effects on body weight were observed by day 14 in other trials that used water with conductivity from 3750 to 7490 umhos/cm.

yq Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SALINE WATER; TOX - Dose-Response Data Format=DR Table; N=10 birds/group; Age=2 d; Tox Exp Tech=drinking water; Tox Exp Dur=14 d; Tox Study Dur=14 d; Tox Stat Sig=Y

yr Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SALINE WATER; TOX - Dose-Response Data Format=DR Table; N=10 birds/group; Age=2 d; Tox Exp Tech=drinking water; Tox Exp Dur=14-28 d; Tox Study Dur=14-28 d; Tox Stat Sig=Y

ys Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; N=NR; Tox Exp Tech=intravenous; Tox Exp Dur=single; Tox Study Dur=up to 24 hr; Tox Stat Sig=NR; Sampled tissues were liver, kidney, heart, lung, pancreas, spleen, adrenals, muscle, ovaries, intestine, thyroid, plasma, brain. Samples were collected at 5 timepoints within 24 hours of treatment.

yt Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Tox Exp Tech=Diet; Tox Exp Dur=6 weeks; Tox Study Dur=6 weeks; Tox Stat Sig=Yes

yu Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=6 wks; Tox Study Dur=6 wks; Tox Stat Sig=Y

yv Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=6 wks; Tox Study Dur=6 wks; Tox Stat Sig=Y

yw Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=6 wks; Tox Study Dur=6 wks; Tox Stat Sig=Y

yx Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=6 wks; Tox Study Dur=6 wks; Tox Stat Sig=Y

yy Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=6 wks; Tox Study Dur=6 wks; Tox Stat Sig=Y; See citation for specific parameters measured.

yz Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Chemical=1464-42-2; N=Controls = 24
Treated = 8; laboratory; Tox Exp Tech=drinking water; Tox Exp Dur=12 weeks; Tox Study Dur=12 weeks; Tox Stat Sig=Yes

za Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Chemical=1464-42-2; N=Controls = 24
Treated = 8; Laboratory; Tox Exp Tech=Drinking water; Tox Exp Dur=12 weeks; Tox Study Dur=12 weeks; Tox Stat Sig=Yes

zb Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Figure; N=40 birds/group; Tox Exp Tech=Diet; Tox Exp Dur=6 weeks; Tox Study Dur=6 weeks; Tox Stat Sig=Yes

zc Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Figure; N=40 birds/group; Tox Exp Tech=Diet; Tox Exp Dur=6 weeks; Tox Study Dur=6 weeks; Tox Stat Sig=Yes

zd Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Figure; N=40 birds/group; Tox Exp Tech=Diet; Tox Exp Dur=6 weeks; Tox Study Dur=6 weeks; Tox Stat Sig=Yes

ze Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Tox Exp Tech=Diet; Tox Exp Dur=6 weeks; Tox Study Dur=6 weeks; Tox Stat Sig=No

zf Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Chemical=1464-42-2; N=5-11 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR (at least 6 wks); Tox Study Dur=NR; Tox Stat Sig=Y

zg Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Chemical=1464-42-2; N=5-11 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR (at least 6 wks); Tox Study Dur=NR; Tox Stat Sig=Y; Selenomethionine at 10 ppm in the parental diet also caused sig. increased sorbitol dehydrogenase activity. See citation for other blood parameters measured.

zh Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Chemical=1464-42-2; N=5-11 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR (at least 6 wks); Tox Study Dur=NR; Tox Stat Sig=Y

zi Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=10102-18-8; TOX - Chemical=1464-42-2; N=5-11 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR (at least 6 wks); Tox Study Dur=NR; Tox Stat Sig=Y

zj Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=25 birds/group; Age=1 day; Tox Exp Tech=diet; Tox Exp Dur=2 wks; Tox Study Dur=2 wks; Tox Stat Sig=Y; Differences in accumulation were significant between yeast and all other selenium treatment groups.

zk Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=25 birds/group; Age=1 day; Tox Exp Tech=diet; Tox Exp Dur=2 wks; Tox Study Dur=2 wks; Tox Stat Sig=Y

zl Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=15 pairs/treatment group, 10 pairs/control group; Tox Exp Tech=diet; Tox Exp Dur=through reproduction until 6 days of age in ducklings; Tox Study Dur=through reproduction until 6 days of age in ducklings; Tox Stat Sig=Y; All selenium groups had higher selenium in eggs than controls; selenomethionine groups had higher selenium in eggs than selenized yeast group.

zm Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=25 birds/group; Age=1 day; Tox Exp Tech=diet; Tox Exp Dur=2 wks; Tox Study Dur=2 wks; Tox Stat Sig=Y

zn Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=25 birds/group; Age=1 day; Tox Exp Tech=diet; Tox Exp Dur=2 wks; Tox Study Dur=2 wks; Tox Stat Sig=N

zo Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=25 birds/group; Age=1 day; Tox Exp Tech=diet; Tox Exp Dur=2 wks; Tox Study Dur=2 wks; Tox Stat Sig=Y; See citation for similar trial with 75% wheat diet.

zp Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=25 birds/group; Age=1 day; Tox Exp Tech=diet; Tox Exp Dur=2 wks; Tox Study Dur=2 wks; Tox Stat Sig=Y

zq Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=10/dose; Age=1 d; Tox Exp Tech=diet; Tox Exp Dur=2 wks; Tox Study Dur=2 wks; Tox Stat Sig=Y; ducks fed a wheat based diet

zr Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=25 birds/group; Age=1 day; Tox Exp Tech=diet; Tox Exp Dur=2 wks; Tox Study Dur=2 wks; Tox Stat Sig=Y

zs Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=25 birds/group; Age=1 day; Tox Exp Tech=diet; Tox Exp Dur=2 wks; Tox Study Dur=2 wks; Tox Stat Sig=Y

zt Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=15 pairs/treatment group, 10 pairs/control group; Tox Exp Tech=diet; Tox Exp Dur=through reproduction until 6 days of age in ducklings; Tox Study Dur=through reproduction until 6 days of age in ducklings; Tox Stat Sig=N

zu Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=15 pairs/treatment group, 10 pairs/control group; Tox Exp Tech=diet; Tox Exp Dur=through reproduction until 6 days of age in ducklings; Tox Study Dur=through reproduction until 6 days of age in ducklings; Tox Stat Sig=Y; Ducklings were fed untreated diets after hatching.

zv Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=15 pairs/treatment group, 10 pairs/control group; Tox Exp Tech=diet; Tox Exp Dur=through reproduction until 6 days of age in ducklings; Tox Study Dur=through reproduction until 6 days of age in ducklings; Tox Stat Sig=Y; There were significantly more embryo deformities in the selenized yeast group than in either selenomethionine group.

zw Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=15 pairs/treatment group, 10 pairs/control group; Tox Exp Tech=diet; Tox Exp Dur=through reproduction until 6 days of age in ducklings; Tox Study Dur=through reproduction until 6 days of age in ducklings; Tox Stat Sig=N

zx Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=15 pairs/treatment group, 10 pairs/control group; Tox Exp Tech=diet; Tox Exp Dur=through reproduction until 6 days of age in ducklings; Tox Study Dur=through reproduction until 6 days of age in ducklings; Tox Stat Sig=Y; Duckling survival was significantly higher in the selenized yeast group than in the seleno-L-methionine group.

zy Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=15 pairs/treatment group, 10 pairs/control group; Tox Exp Tech=diet; Tox Exp Dur=through reproduction until 6 days of age in ducklings; Tox Study Dur=through reproduction until 6 days of age in ducklings; Tox Stat Sig=Y; Hatchability was significantly higher in the selenized yeast group than in either selenomethionine group.

zz Both Adult and Juv.; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SELENIUM COMPOUNDS; TOX - Chemical=1464-42-2; N=15 pairs/treatment group, 10 pairs/control group; Tox Exp Tech=diet; Tox Exp Dur=through reproduction until 6 days of age in ducklings; Tox Study Dur=through reproduction until 6 days of age in ducklings; Tox Stat Sig=Y; Duckling production was significantly higher in the selenized yeast group than in the seleno-L-methionine group.

{a Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15/group; Age=1-day old; Tox Exp Tech=Dietary; Tox Exp Dur=4 weeks; Tox Study Dur=4 weeks; Tox Stat Sig=Yes; See citation for Se accumulation data for diets with varied methionine and protein levels.

{b Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; N=3; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=84 days; Tox Stat Sig=Yes

{c Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=10-25; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=16 wks; Tox Study Dur=16 wks; Tox Stat Sig=Y; Tissue levels were significantly higher than controls at 10, 20, 40 ppm. See table for heart, kidney, brain and spleen residues.

{d Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Tox Exp Tech=Diet; Tox Exp Dur=6 weeks; Tox Study Dur=6 weeks; Tox Stat Sig=Yes

{e Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; N=5 birds; Tox Exp Tech=diet; Tox Exp Dur=20 d; Tox Study Dur=40 d; Tox Stat Sig=NR; See citation for selenium accumulation and depuration curves (in eggs).

{f Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=6 wks; Tox Study Dur=6 wks; Tox Stat Sig=Y

{g Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Figure; N=10 birds/group; Age=2 yr; Tox Exp Tech=diet; Tox Exp Dur=14 wks; Tox Study Dur=14 wks; Tox Stat Sig=Y; See figure for liver Se concentrations at different doses.

{h Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; N=3; Tox Exp Tech=Diet; Tox Exp Dur=42 days; Tox Study Dur=84 days; Tox Stat Sig=Yes; The regression R^2 values were 0.65 and 0.92 for liver and muscle, respectively.
The time (days) to reach the asymptote was 7.8 and 81.0 for liver and muscle, respectively.

{i Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; N=Controls = 24
Treated = 8; Laboratory; Tox Exp Tech=Drinking water; Tox Exp Dur=12 weeks; Tox Study Dur=12 weeks; Tox Stat Sig=Yes; See Figure 7 for data. Liver concentrations also increased.

{j Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; N=3; Tox Exp Tech=Diet; Tox Exp Dur=28 days; Tox Study Dur=92 days; Tox Stat Sig=Yes; R^2 = 0.86 (liver), 0.74 (muscle) (P < 0.01).
R^2 = 0.79 (liver at peak), 0.84 (muscle at peak) (P < 0.01)
See Tables 1 and 2 for equations and variables.

{k Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15/group; Age=1-day old; Tox Exp Tech=Dietary; Tox Exp Dur=4 weeks; Tox Study Dur=4 weeks; Tox Stat Sig=Yes

{l Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=6 wks; Tox Study Dur=6 wks; Tox Stat Sig=Y

{m Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=21/dose; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=16 wks; Tox Study Dur=16 wks; Tox Stat Sig=Y

{n Chick; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; N=32, 14, 14, 14, 11 in the 0, 1, 2, 4, and 8 ppm groups; Age=6 days; Tox Exp Tech=parental diet; Tox Exp Dur=4 weeks (parents); Tox Study Dur=1 day; Tox Stat Sig=Not significant; The birds were frightened by a flashing black and white pattern and the sound of plastic blades scraping against wire mesh.

{o Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Figure; N=21/dose; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=16 wks; Tox Study Dur=16 wks; Tox Stat Sig=Y

{p Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=10 birds/group; Age=2 yr; Tox Exp Tech=diet; Tox Exp Dur=14 wks; Tox Study Dur=14 wks; Tox Stat Sig=Y

{q Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=6 wks; Tox Study Dur=6 wks; Tox Stat Sig=Y

{r Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=6 wks; Tox Study Dur=6 wks; Tox Stat Sig=Y; See citation for specific parameters measured.

{s Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=10 birds/group; Age=2 yr; Tox Exp Tech=diet; Tox Exp Dur=14 wks; Tox Study Dur=14 wks; Tox Stat Sig=Y

{t Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Figure; N=10 birds/group; Age=2 yr; Tox Exp Tech=diet; Tox Exp Dur=14 wks; Tox Study Dur=14 wks; Tox Stat Sig=Y

{u Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15/group; Age=1-day old; Tox Exp Tech=Diet; Tox Exp Dur=4 weeks; Tox Study Dur=4 weeks; Tox Stat Sig=Yes; See table for other plasma components measured and effects of a restricted protein diet.

{v Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; N=Controls = 24
Treated = 8; Laboratory; Tox Exp Tech=Drinking water; Tox Exp Dur=12 weeks; Tox Study Dur=12 weeks; Tox Stat Sig=Yes; The reaction to the PPD antigen was measured by size of reaction.

{w Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15/group; Age=1-day old; Tox Exp Tech=Dietary; Tox Exp Dur=4 weeks; Tox Study Dur=4 weeks; Tox Stat Sig=Yes; Hepatic lesions included depletion of glycogen and fatty metamorphosis (15 ppm group); hepatocellular necrosis and bile duct hyperplasia (60 ppm group).

{x Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=10 birds/group; Age=2 yr; Tox Exp Tech=diet; Tox Exp Dur=14 wks; Tox Study Dur=14 wks; Tox Stat Sig=Y

{y Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=21/dose; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=16 wks; Tox Study Dur=16 wks; Tox Stat Sig=Y; Abnormalities included muscle, spleen, and pancreas atrophy, loss of body fat, liver lesions, enlarged kidneys and gall bladder, and changes to feet and digits.

{z Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Figure; N=10 birds/group; Age=2 yr; Tox Exp Tech=diet; Tox Exp Dur=14 wks; Tox Study Dur=14 wks; Tox Stat Sig=Y

|a Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=21/dose; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=16 wks; Tox Study Dur=16 wks; Tox Stat Sig=Y

|b Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=21/dose; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=16 wks; Tox Study Dur=16 wks; Tox Stat Sig=Y

|c Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=10 birds/group; Age=2 yr; Tox Exp Tech=diet; Tox Exp Dur=14 wks; Tox Study Dur=14 wks; Tox Stat Sig=Y

|d Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15/group; Age=1-day old; Tox Exp Tech=Dietary; Tox Exp Dur=4 weeks; Tox Study Dur=4 weeks; Tox Stat Sig=Yes; The effect was most pronounced in low protein diets without methionine supplementation. 22% protein was more protective of the toxicity than either 11% or 44%.

|e Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=40 birds/group; Age=day old; Tox Exp Tech=diet; Tox Exp Dur=6 wks; Tox Study Dur=6 wks; Tox Stat Sig=Y

|f Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=21/dose; Age=14 mo; Tox Exp Tech=diet; Tox Exp Dur=16 wks; Tox Study Dur=16 wks; Tox Stat Sig=N

|g Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=21/dose; Age=14 mo; Tox Exp Tech=diet; Tox Exp Dur=16 wks; Tox Study Dur=16 wks; Tox Stat Sig=NR; See paper for detailed histological descriptions.

|h Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=21/dose; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=16 wks; Tox Study Dur=16 wks; Tox Stat Sig=Y

|i Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; N=5-11 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR (at least 6 wks); Tox Study Dur=NR; Tox Stat Sig=Y

|j Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1464-42-2; N=5-11 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=NR (at least 6 wks); Tox Study Dur=NR; Tox Stat Sig=Y

|k Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SEWAGE SLUDGE; N=10/dose; Tox Exp Tech=diet; Tox Exp Dur=28 d (Milorganite); 57 d (Metrogro); Tox Study Dur=42 or 71d; Tox Stat Sig=Y; see citation for composition of sewage sludge and liver Cd, Cr, Cu and Pb concentrations

|l Adult; Lab; M; Species - California (R)=Anas platyrhynchos; TOX - Chemical=SEWAGE SLUDGE; N=10/dose; Tox Exp Tech=diet; Tox Exp Dur=28 d (Milorganite); 57 d (Metrogro); Tox Study Dur=42 or 71d; Tox Stat Sig=N; see citation for composition of sewage sludge

|m Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=62-74-8; N=5; Age=36 hr, 7 d, 30 d, or 6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

|n Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=688-73-3; N=20/group; Age=7 wks; Tox Exp Tech=intramuscular; Tox Exp Dur=1-8 wks; Tox Study Dur=1-8 wks; Tox Stat Sig=Y; See citation for weekly changes in endpoints.

|o Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=STEEL COMPOUNDS; TOX - Chemical=688-73-3; N=20/group; Age=7 wks; Tox Exp Tech=intramuscular; Tox Exp Dur=1-8 wks; Tox Study Dur=1-8 wks; Tox Stat Sig=Y; See citation for weekly changes in endpoints.

|p Adult; CANADA; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=57-24-9; N=4; Saskatoon, Saskatchewan; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR

|q Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=8001-35-2; N=30/dose; Age=3 or 8d of development; Tox Exp Tech=in ovo, immersion; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=NR; malformations in surviors noted

|r Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=8001-35-2; N=30/dose; Age=3 or 8d of development; Tox Exp Tech= in ovo, external application; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=NR; malformations in survivors noted

|s Juvenile; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=8001-35-2; N=5; Age=36 hr, 7 d, 30 d, or 6 mos; Tox Exp Tech=Gavage; Tox Exp Dur=Single exposure; Tox Study Dur=NR; Tox Stat Sig=NR

|t Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=93-76-5; N=30/dose; Age=3 or 8d of development; Tox Exp Tech=in ovo, immersion; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=NR; malformations in surviors noted

|u Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=93-76-5; N=30/dose; Age=3 or 8d of development; Tox Exp Tech=in ovo, external application; Tox Exp Dur=single; Tox Study Dur=18 d; Tox Stat Sig=NR; malformations in survivors noted

|v Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=994-31-0; N=5/dose; Age=3-4 d; Tox Exp Tech=diet; Tox Exp Dur=73 - 75 d; Tox Study Dur=73 - 75 d; Tox Stat Sig=NR

|w Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=994-31-0; N=5/dose; Age=3-4 d; Tox Exp Tech=diet; Tox Exp Dur=73 - 75 d; Tox Study Dur=73 - 75 d; Tox Stat Sig=Y; see citation for discussion of lesions observed

|x Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1066-45-1; N=5/dose; Age=3-4 d; Tox Exp Tech=diet; Tox Exp Dur=73 - 75 d; Tox Study Dur=73 - 75 d; Tox Stat Sig=NR; clinical signs included tremors, difficulty walking, lethargy and ataxia

|y Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1066-45-1; N=5/dose; Age=3-4 d; Tox Exp Tech=diet; Tox Exp Dur=73 - 75 d; Tox Study Dur=73 - 75 d; Tox Stat Sig=NR; see citation for additional descriptions of histological lesions

|z Juvenile; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1066-45-1; N=5/dose; Age=3-4 d; Tox Exp Tech=diet; Tox Exp Dur=73-75 d; Tox Study Dur=73-75 d; Tox Stat Sig=NR; ducklings in 50 ppm group all died within 5 d of exposure

}a Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1066-45-1; N=5/dose; Age=3-4 d; Tox Exp Tech=diet; Tox Exp Dur=73 - 75 d; Tox Study Dur=73 - 75 d; Tox Stat Sig=Y

}b Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=27774-13-6; TOX - Dose-Response Data Format=DR Table; N=5 pairs/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=NR; Concentrations increased with increasing dose. Females accumulated more vanadium in femurs than males with 100 ppm in the diet. See table for tissue concentrations at other doses.

}c Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=27774-13-6; TOX - Dose-Response Data Format=DR Table; N=5 pairs/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=NR

}d Adult; Lab; F; Species - California (R)=Anas platyrhynchos; TOX - Chemical=27774-13-6; TOX - Dose-Response Data Format=DR Table; N=5 pairs/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=NR; Few hens laid in the study

}e Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=27774-13-6; TOX - Dose-Response Data Format=DR Table; N=5 pairs/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=NR

}f Adult; Lab; B; Species - California (R)=Anas platyrhynchos; TOX - Chemical=27774-13-6; N=5 pairs/group; Age=1 yr; Tox Exp Tech=diet; Tox Exp Dur=12 wks; Tox Study Dur=12 wks; Tox Stat Sig=N

}g Embryo; Lab; NR; Species - California (R)=Anas platyrhynchos; TOX - Chemical=1330-20-7; TOX - Dose-Response Data Format=DR Table; N=30 eggs/group; Age=3 or 8 days of incubation (time of treatment); Tox Exp Tech=egg immersion; Tox Exp Dur=single 30 second exposure; Tox Study Dur=18 d; Tox Stat Sig=N

References

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